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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
20401B ASSAULT BREAKER MISSILE NUMBER 0004 ROUND NUMBER M2A1, 2--ETC(U)
MAY 81 D C KELLER
UNCLASSIFIED ERADCOM/ASL-DR-1179

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DR 1179 ✓
May 1981

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LEVEL II

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METEOROLOGICAL DATA REPORT

20401B Assault Breaker
Missile No. 0004
Round No. M2A1
20 May 1981

by

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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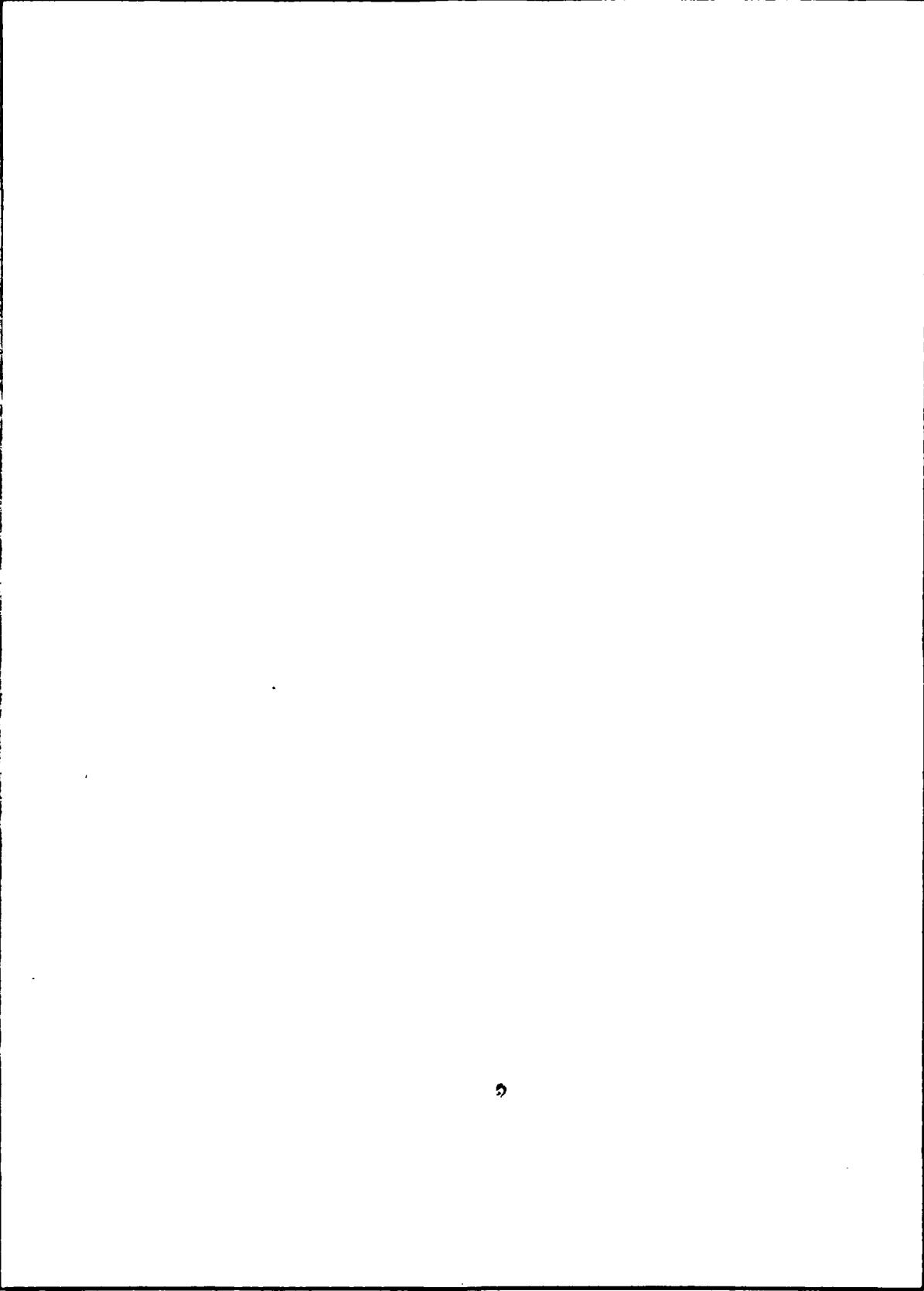
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INTRODUCTION

20401B Assault Breaker, Missile Number 0004, Round Number M2A1, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1010 MDT, 20 May 1981. The scheduled launch time was 1000 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}$ C), relative humidity, dew point ($^{\circ}$ C), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes, and at the Jallen Met Site at T-30, T-0, and T+30 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometer at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at

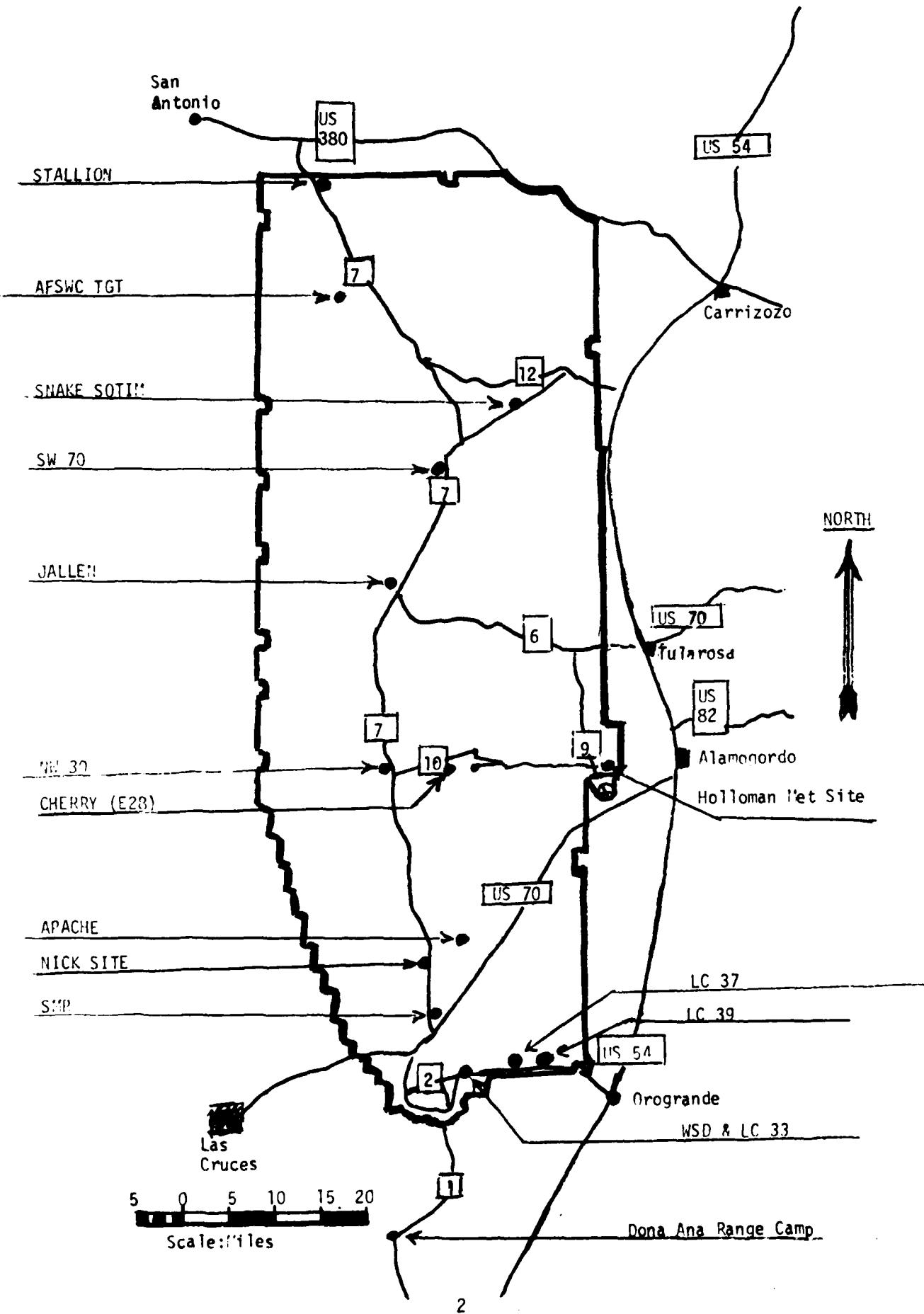
SITE AND ALTITUDE

LC-33 2760 meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME

JAL	0730 MDT
LC-37	0900 MDT
HMS	0900 MDT
JAL	0900 MDT
WSD	1000 MDT
JAL	1000 MDT



PROJECT SURFACE OBSERVATION

TABLE 1

DATE 20 MAY 1981
DAY MONTH YEAR

TIME <u>W.D.</u>	PRESSURE mbs	TEMPERATURE OF °C	DEW POINT OF °C	RELATIVE HUMIDITY %	DE'ISIBILITY gm/m³	MIND DIRECTION deg's Tn	MIND SPEED kts	CHARACTER	VISIBIL- ITY
1010	878.8	21.2	8.7	45	1030	180	06		40

STATION LC-33X = 484, 982.64 Y = 185, 957.73 H = 3983.00

OBSTRUCTIONS TO VISIBILITY	CLOUDS			REMARKS		
	1st LAYER AMT	TYPE	HGT	2nd LAYER AMT	TYPE	HGT
	8	CI	25000			

PSYCHROMETRIC COMPUTATION

TIME: MDT	1010
DRY BULB TEMP.	21.2
WET BULB TEMP.	13.6
WET BULB DEPR.	7.6
DEW POINT	8.7
RELATIVE HUMID.	45

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1			POLE #2			POLE #3		
X485,874.29			X485,874.93			X485,877.29		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED FT.	T-TIME SEC	DIR DEG	SPEED KTS
T -30	164	06	T -30	166	05	T -30	166	08
T -20	160	06	T -20	156	04	T -20	159	08
T -10	145	05	T -10	154	03	T -10	154	06
T 0.0	149	04	T 0.0	158	03	T 0.0	165	06
T +10	171	04	T +10	184	03	T +10	168	06

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T -30	165	08	T -30	180	05
T -20	172	05	T -20	193	04
T -10	171	07	T -10	185	06
T 0.0	164	08	T 0.0	180	07
T +10	175	05	T +10	188	05

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T -30	177	06	T -30	142	07
T -20	180	05	T -20	169	08
T -10	180	06	T -10	174	06
T 0.0	175	08	T 0.0	171	09
T +10	180	06	T +10	167	07

TABLE 4

RELEASED FROM LC-33

PILOT-BALLOON MEASURED WIND DATA

DATE 20 May 1981

TIME 1005 MDT

TABLE 5

PILOT-BALLOON MEASURED WIND DATA

RELEASER RELEASED FROM

| C-33

DATE 20 May 1981

TIME 1022 MDT

PROJECT SURFACE OBSERVATION

TABLE 6

DATE 20 MAY 1981
MONTH YEAR

TIME <u>H</u> <u>M</u> <u>T</u>	PRESSURE mbs	TEMPERATURE OF °C	DEW POINT OF °C	RELATIVE HUMIDITY %	DENSITY g/m³	DIRECTION deg Tn	SPEED kts	CHARACTER kts	VISIBIL- ITY
0930	875.7	21.0	8.9	46	1.031	190	11		40
1000	875.3	20.6	8.7	46	1.032	185	12		40
1030	874.9	22.5	9.7	45	1.024	170	15		40

OBSTRUCTIONS TO VISIBILITY	CLOUDS									REMARKS
	1st LAYER			2nd LAYER			3rd LAYER			
AMT	TYPE	HGT	AMT	TYPE	HGT	AMT	TYPE	HGT		
1	CU	5500	9	CS	19000					
1	CU	5500	9	CS	19000					
1	CU	5500	9	CS	19000					

PSYCHROMETRIC COMPUTATION

TIME:	DRY BULB TEMP.	WET BULB TEMP.	DEPR.	DEW POINT	RELATIVE HUMID.
0930	21.0	13.6	7.4	8.9	47%
					46%
					45%

TABLE 7

AIMING MET MESSAGE
20 May 1981

JAL 0730 MDT
METCM1332065
201350124876

00320003	29050876
01344010	28970865
02312024	28820840
03272031	28660801
04292028	28240755
05354024	28020710
06372034	27750668
07349041	27380628
08365047	27040590
09392057	26740554
10384058	26440519
11385052	26110487
12407060	25630441
13429057	24960385

STATION ALTITUDE 4051.00 FEET MSL
20 MAY 81 0730 HRS MD

ASCENSION NO. 34

SIGNIFICANT LEVEL DATA
1400030034
JALLEN

TABLE 8

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPONT DEGREES CENTIGRADE	REL.HUM. PERCENT
875.7	4051.0	16.1	7.1	55.0
850.0	4880.2	14.0	5.9	58.0
799.0	6591.7	12.4	5.3	62.0
735.0	8868.9	6.0	2.6	79.0
700.0	10184.4	6.4	-4.9	44.0
604.8	14066.0	-2.0	-12.6	44.0
500.0	18949.1	-11.8	-30.1	20.0
465.8	20723.8	-14.6	-33.0	19.0
433.6	22498.3	-17.6	-30.6	31.0
418.4	23373.8	-19.7	-29.0	43.0
400.0	24468.5	-21.7	-26.0	68.0
379.6	25730.5	-24.6	-28.3	71.0
345.6	27958.3	-29.3	-35.6	54.0
300.0	31233.2	-37.0	-43.9	48.0

STATION ALTITUDE 4051.00 FEET MSL
20 MAY 81 03n HRS MDT
ASCENSION NO. 34

UPPER AIR DATA
1400030034
JALLEN
TABLE 9

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SOUND KNOIS	WIND DATA DIRECTION DEGREES (IN)	INDEX OF REFRACTION	
4051.0	875.7	16.1	7.1	55.0	1050.1	664.0	180.0	3.1
4500.0	861.7	15.0	6.4	56.6	1037.5	662.7	164.1	8.4
5000.0	845.3	13.9	5.8	58.3	1022.9	661.4	160.4	14.5
5500.0	831.2	13.4	5.7	59.4	1006.2	660.9	158.9	20.6
6000.0	816.3	13.0	5.5	60.6	989.7	660.3	158.0	26.7
6500.0	801.7	12.5	5.4	61.8	973.6	659.8	157.2	28.4
7000.0	787.1	11.3	4.9	65.0	960.1	658.4	156.5	29.7
7500.0	772.8	9.8	4.4	68.8	947.4	656.7	159.3	28.6
8000.0	756.8	8.4	3.8	72.5	935.0	655.1	163.7	26.8
8500.0	745.0	7.0	3.1	76.2	922.7	653.4	170.9	25.2
9000.0	731.4	6.0	2.0	75.5	909.3	652.1	181.1	24.3
9500.0	718.0	6.2	-5	62.2	892.6	652.1	191.7	24.3
10000.0	704.8	6.3	-3.6	48.9	876.3	652.1	201.4	27.1
10500.0	691.7	5.7	-5.6	44.0	862.2	651.3	209.0	30.6
11000.0	678.8	4.6	-6.5	44.0	849.5	650.0	209.2	32.7
11500.0	660.2	3.6	-7.5	44.0	837.0	648.7	208.1	34.5
12000.0	653.7	2.5	-8.5	44.0	824.0	647.4	204.2	36.2
12500.0	641.5	1.4	-9.5	44.0	812.6	646.1	199.0	38.3
13000.0	629.6	.3	-10.5	44.0	800.7	644.8	197.1	39.9
13500.0	617.8	-8	-11.5	44.0	789.0	643.5	196.9	41.3
14000.0	606.3	-1.9	-12.5	44.0	777.4	642.1	200.1	42.4
14500.0	594.7	-2.9	-14.0	41.9	765.5	640.9	204.9	43.7
15000.0	583.2	-3.9	-15.6	39.4	753.6	639.7	210.6	46.1
15500.0	571.9	-4.9	-17.3	37.0	741.9	638.4	216.5	49.4
16000.0	560.9	-5.9	-19.0	34.5	730.4	637.2	219.8	52.1
16500.0	550.1	-6.9	-20.7	32.0	719.1	636.0	221.2	53.7
17000.0	539.5	-7.9	-22.5	29.6	708.0	634.7	220.8	54.4
17500.0	529.0	-8.9	-21.4	27.1	697.0	633.5	217.9	53.9
18000.0	519.8	-9.9	-26.3	24.7	686.2	632.3	215.4	53.9
18500.0	509.6	-10.9	-28.3	22.2	675.6	631.0	214.1	55.0
19000.0	499.0	-11.9	-30.2	20.0	665.1	629.6	213.6	56.7
19500.0	485.1	-12.7	-31.0	19.7	653.9	628.9	214.5	59.5
20000.0	479.5	-13.5	-31.9	19.4	643.0	627.9	216.6	60.5
20500.0	470.0	-14.2	-32.7	19.1	632.2	626.9	220.3	59.4
21000.0	460.6	-15.1	-32.5	20.9	621.6	626.0	224.3	58.3
21500.0	451.4	-15.9	-31.7	24.2	611.1	624.9	228.6	57.3
22000.0	442.4	-16.8	-31.0	27.6	600.9	623.9	230.9	57.4
22500.0	433.6	-17.6	-30.6	31.0	590.8	622.9	232.1	58.1
23000.0	424.8	-18.8	-29.6	37.9	581.6	621.5	233.6	58.1
23500.0	416.2	-19.9	-28.6	45.9	572.3	620.1	235.3	57.8

STATION ALTITUDE 4051.00 FEET MSL
 20 MAY 81 0730 IRS MDT
 ASCENSION NO. 34

UPPER AIR DATA
 1400030034
 JALLEN

TABLE 9 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRLCTION DEGREES (TN)	INDEX OF REFRACTION
24000.0	407.8	-20.8	-27.0	57.3	562.7	619.0	237.0	57.6
24500.0	399.5	-21.8	-26.0	68.1	553.2	617.9	238.4	57.8
25000.0	391.3	-22.9	-27.0	69.3	544.4	616.5	239.8	58.0
25500.0	383.2	-24.1	-27.9	70.5	535.7	615.0	239.8	58.7
26000.0	375.3	-25.2	-29.2	68.9	527.0	613.7	239.8	59.4
26500.0	367.5	-26.2	-30.8	65.1	518.2	612.3	239.1	59.9
27000.0	359.8	-27.3	-32.4	61.3	509.6	611.0	238.0	60.3
27500.0	352.3	-28.3	-34.1	57.5	501.2	609.7	237.1	60.5
28000.0	345.0	-29.4	-35.7	53.9	492.9	608.3	236.5	60.1
28500.0	337.6	-30.6	-37.0	53.0	484.7	606.8	236.0	60.0
29000.0	330.4	-31.7	-38.3	52.1	476.7	605.4	236.3	60.7
29500.0	323.3	-32.9	-39.5	51.2	468.8	603.9	236.5	62.6
30000.0	316.4	-34.1	-40.8	50.3	461.0	602.4	236.6	66.5
30500.0	309.7	-35.3	-42.1	49.3	453.4	600.9		1.000102
31000.0	303.0	-36.5	-43.3	48.4	445.9	599.4		1.000100

STATION ALTITUDE 4051.00 FEET ASL
 20 MAY 81 07.30 hrs MDT
 ASCENSION NO. 34

MANDATORY LEVELS
 1400030054
 JALLEN
 TABLE 10

GEODETTIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	AIR DEGREES CENTIGRADE	TEMPERATURE DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES (TN)	WIND SPEED KNOTS
850.0	4877.	14.0	5.9	58.	161.0	13.0	
800.0	6552.	12.4	5.3	62.	157.2	28.5	
750.0	8316.	7.5	3.4	75.	167.5	25.7	
700.0	10175.	6.4	-4.9	44.	204.3	28.3	
650.0	12155.	2.1	-8.8	44.	202.4	36.9	
600.0	14258.	-2.4	-13.3	45.	202.7	43.1	
550.0	16506.	-6.9	-20.8	32.	221.2	53.7	
500.0	18924.	-11.6	-30.1	20.	213.5	56.3	
450.0	21550.	-16.0	-31.5	25.	229.3	57.1	
400.0	24429.	-21.7	-26.0	60.	238.2	57.8	
350.0	27612.	-28.7	-34.6	56.	236.9	60.4	
300.0	31173.	-37.0	-43.9	48.			

STATION ALTITUDE 4051.37 FFFF MSL
20 MAY 0900 HRS MDT
ASURNITION NO. 96

SIGNIFICANT LEVEL DATA
1400180090
LC-37
TABLE 11

GEODETIC COORDINATES
32°40'17.5" LAT UEG
106°31'23.2" LON UEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT
677.4	4951.4	20.1	90.4
867.0	4387.4	16.8	50.0
850.0	4939.6	14.4	55.0
811.4	6222.7	11.0	47.7
785.2	7123.6	10.9	50.0
765.8	7811.5	12.1	53.3
756.6	8144.5	12.6	55.0
747.2	8488.9	12.7	57.4
700.0	10271.2	8.0	17.0
692.2	10574.3	7.4	17.5
674.2	11285.9	7.1	19.4
647.2	12383.9	4.4	20.7
559.8	16188.5	-6.4	17.4
526.6	17749.4	-10.1	25.5
500.0	19058.4	-12.0	34.7
470.4	20535.7	-14.8	37.0
455.0	21414.8	-14.5	36.7
424.6	23125.9	-18.3	35.4
416.2	23616.2	-18.9	24.7
406.9	24169.2	-19.9	26.6
400.0	24586.0	-21.0	27.0
380.4	25003.5	-22.7	31.5
366.2	26717.8	-25.1	35.0
345.8	28078.9	-28.7	36.2
329.1	29239.0	-31.5	42.6
306.8	30864.6	-34.3	48.9
300.0	31379.4	-35.7	21.0
264.6	34206.0	-43.8	0.0
250.0	35454.1	-46.6	55.0
200.0	40163.2	-62.3	58.0
167.8	43699.9	-66.6	44.0
159.4	44718.9	-68.7	-68.1
150.0	45917.7	-69.1	-65.8
140.8	47152.8	-73.1	-65.6
135.2	47944.3	-69.4	-62.6
124.0	49651.6	-68.4	-62.7
120.8	50172.5	-68.7	-62.7
113.6	51368.9	-69.4	-62.7
110.4	51381.6	-69.4	-62.7
103.4	52314.1	-69.4	-62.7

STATION ALTITUDE 4051.37 FEET MSL
 20 MAY 81 0900 HRS MDT
 ASCENSION NO. 36

SIGNIFICANT LEVEL DATA

1400100096
 LC-37

STATION COORDINATES
 32.40175 LAT DEG
 166.51232 LONG DEG

TABLE 11 CON'T

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE METERS MSL FEEt	TEMPERATURE AIR DEMPVINI OF GPEES CENTIGRADE	REL.HUM. PERCENT
100.0	53096.7	-61.1	
97.0	54623.3	-59.5	
82.2	58023.3	-61.9	
79.4	58734.3	-60.0	
74.0	60177.2	-62.6	
70.0	61308.7	-62.6	
65.5	62670.8	-59.8	
59.0	64822.2	-60.9	
50.0	68264.0	-55.6	
30.0	79133.3	-51.2	
24.2	83790.4	-47.7	
20.0	87966.6	-46.6	
13.6	96643.7	-35.8	
10.0	103735.8	-35.3	
9.5	104923.3	-34.2	

STATION ALTITUDE 4051.37 FEET MSL
20 MAY 81 IIRS MDI
ASCENSION NO. 96

UPPER AIR DATA
1400180046
LC-37

TABLE 12

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	INDEX OF REFRACTION
4051.4	877.4	20.1	9.4	50.0	1037.0	668.8	145.0	6.0
4500.0	863.5	16.3	6.2	51.0	1034.9	664.2	150.3	7.6
3000.0	849.1	14.2	5.5	55.5	1024.0	661.8	154.2	9.3
5500.0	932.9	12.9	5.2	59.4	1010.2	660.2	158.6	11.1
6000.0	818.0	11.6	4.9	63.5	996.7	658.7	158.6	12.9
6500.0	805.2	11.0	4.8	65.6	980.9	658.0	166.1	16.3
7000.0	780.7	10.9	5.0	66.7	963.2	658.0	177.6	21.4
7500.0	774.5	11.6	4.2	60.4	943.9	658.7	185.7	24.9
8000.0	760.6	12.4	4.9	39.7	925.3	659.2	193.1	27.8
8500.0	746.9	12.7	-10.3	10.0	909.1	659.1	196.2	29.1
9000.0	733.3	11.4	-12.2	17.9	896.9	657.5	202.4	29.5
9500.0	720.0	10.0	-14.1	16.7	884.8	655.9	205.0	30.5
10000.0	707.0	8.7	-16.0	15.6	873.0	654.4	206.5	31.8
10500.0	694.1	7.5	-17.4	15.0	860.7	653.0	208.1	33.8
11000.0	681.4	7.2	-18.6	13.8	846.0	652.6	209.6	36.2
11500.0	668.8	6.6	-19.7	13.2	832.4	651.8	210.1	37.5
12000.0	656.5	5.3	-20.2	13.7	820.7	650.4	210.3	38.3
12500.0	644.3	4.1	-20.3	14.8	809.1	648.9	212.7	38.2
13000.0	632.2	2.7	-16.0	18.4	797.9	647.2	216.0	37.9
13500.0	620.2	1.2	-18.1	21.9	786.8	645.6	221.0	38.3
14000.0	609.5	-2.2	-17.6	25.5	775.9	644.0	225.7	39.3
14500.0	597.0	-1.6	-17.3	29.0	765.2	642.3	225.2	40.8
15000.0	585.6	-3.0	-17.1	32.6	754.6	640.6	220.7	42.2
15500.0	574.7	-4.4	-17.2	36.1	744.3	636.9	217.9	43.0
16000.0	563.8	-5.9	-17.4	39.7	734.1	637.2	217.1	43.4
16500.0	553.0	-7.1	-18.9	38.2	723.5	635.7	218.7	43.3
17000.0	542.3	-6.3	-21.4	33.7	712.8	634.2	219.6	42.5
17500.0	531.8	-9.5	-24.1	29.2	702.2	632.8	220.8	41.4
18000.0	521.4	-10.5	-26.9	24.3	691.1	631.6	221.5	40.7
18500.0	511.2	-11.2	-30.2	19.0	679.5	630.7	222.2	39.5
19000.0	501.2	-11.9	-34.2	13.6	668.1	629.7	221.6	37.4
19500.0	491.3	-12.8	-35.4	13.0	657.2	628.7	221.5	38.2
20000.0	481.5	-13.7	-36.1	13.0	646.5	627.5	223.7	40.7
20500.0	471.0	-14.6	-36.9	13.0	636.0	626.4	225.9	43.4
21000.0	462.6	-14.7	-36.9	13.0	623.3	626.4	228.9	46.6
21500.0	453.4	-14.7	-36.6	13.4	611.0	626.4	231.5	49.5
22000.0	444.4	-15.8	-35.9	15.7	601.4	625.0	233.4	50.7
22500.0	435.5	-16.9	-35.5	18.1	591.9	623.7	235.2	51.9
23000.0	426.8	-18.0	-35.2	20.4	582.6	622.3	236.7	51.1
23500.0	418.2	-18.8	-26.4	50.8	572.3	621.6	233.4	50.4

STATION ALTITUDE 4051.37 FEET MSL
 20 MAY 61 0900 IRS MDT
 ASCENSION NO. 96

UPPER AIR DATA
 1400160050
 LC-37

TABLE 12 CON'T

GEOMETRIC PRESSURE ALTITUDE MSL FEET	AIR DEPOINT MILLIBARS OF GRAMS	TEMPERATURE CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CURRIC METER	SOUND KNOTS	WIND DATA SPEED KNOTS (T)	INDEX OF REFRACTION
24000.0	404.7	-19.6	-26.0	56.5	562.5	240.2	1.000150
24500.0	401.4	-20.8	-26.9	57.4	553.7	242.0	1.000127
25000.0	395.2	-21.6	-28.5	53.2	544.2	243.2	1.000125
25500.0	385.2	-22.3	-30.4	47.5	534.6	244.3	1.000122
26000.0	377.3	-23.2	-32.3	42.9	525.7	245.4	1.000120
26500.0	369.5	-24.5	-34.1	40.2	517.0	241.8	1.000117
<7000.0	361.9	-25.8	-35.6	39.0	509.6	241.7	1.000115
27500.0	354.3	-27.2	-36.8	39.0	501.7	240.5	1.000113
28000.0	347.0	-28.5	-38.1	39.0	493.9	241.0	1.000111
28500.0	339.6	-29.7	-39.8	36.5	485.9	241.7	1.000109
29000.0	332.5	-30.9	-41.7	33.4	478.1	242.2	1.000107
<9500.0	325.4	-31.9	-43.6	30.2	469.9	241.1	1.000105
30000.0	316.5	-32.8	-45.4	26.9	461.6	240.5	1.000103
31500.0	311.7	-33.7	-47.4	23.5	453.3	246.0	1.000102
31000.0	305.0	-34.7	-51.8	15.5**	445.5	243.4	1.000100
31500.0	298.4	-36.0	-41.6	43.4	438.4	252.1	1.000098
32000.0	291.8	-37.5	-43.2	43.0	431.4	254.0	1.000096
32500.0	285.4	-38.9	-44.5	424.5	596.2	255.4	1.000095
33000.0	279.2	-40.3	-46.0	417.7	594.4	256.2	1.000093
33500.0	272.0	-41.6	-48.4	411.1	592.6	256.6	1.000092
34000.0	267.0	-43.2	-49.0	404.6	590.7	257.0	1.000090
34500.0	261.1	-44.5	-50.1	397.7	589.1	257.4	1.000089
35000.0	255.2	-45.6	-51.8	390.7	587.7	258.2	1.000087
35500.0	249.5	-46.8	-53.4	383.8	586.2	259.2	1.000085
36000.0	243.6	-48.4	-55.1	377.0	584.0	260.2	1.000084
36500.0	237.9	-50.1	-56.8	371.6	581.8	261.1	1.000083
37000.0	232.3	-51.8	-58.4	365.6	579.7	262.5	1.000081
37500.0	226.9	-53.4	-60.1	359.7	577.5	264.2	1.000080
38000.0	221.6	-55.1	-61.6	354.0	575.3	266.4	1.000079
38500.0	216.4	-56.8	-63.3	348.4	573.1	268.2	1.000078
39000.0	211.3	-58.4	-65.0	342.9	570.9	269.2	1.000076
39500.0	206.4	-60.1	-66.5	337.4	568.7	269.5	1.000075
40000.0	201.6	-61.6	-68.2	332.1	566.4	263.9	1.000074
40500.0	196.7	-62.7	-69.8	325.6	565.1	268.2	1.000073
41000.0	191.9	-63.3	-70.4	318.5	564.3	267.3	1.000071
41500.0	187.2	-63.9	-70.9	311.6	563.5	266.5	1.000069
42000.0	182.6	-64.5	-71.5	304.9	562.7	265.4	1.000068
42500.0	178.1	-65.1	-72.1	298.3	561.9	266.9	1.000066
43000.0	173.7	-65.7	-72.7	291.6	561.0	267.3	1.000065
43500.0	169.5	-66.4	-73.4	285.5	560.2	267.4	1.000064

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL
20 MAY 81 0900 HRS MDT
ASCENSION NO. 96

UPPER AIR DATA
14001800Z
LC-37

TABLE 12 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (IN)	WIND SPEED KNOTS	INDEX OF REFRACTION
44000.0	165.3	-67.2	279.6	559.1	267.6	48.2	1.000062	
44500.0	161.2	-68.2	274.0	557.7	260.5	48.1	1.000061	
45000.0	157.1	-68.8	267.9	556.9	264.6	48.0	1.000060	
45500.0	153.2	-69.0	261.4	556.7	262.8	48.1	1.000058	
46000.0	149.4	-69.4	255.3	556.1	261.6	48.5	1.000057	
46500.0	145.6	-71.0	250.9	555.9	260.4	49.0	1.000056	
47000.0	141.9	-72.6	246.5	551.7	259.3	49.5	1.000055	
47500.0	138.3	-71.5	238.9	553.2	259.5	50.1	1.000053	
48000.0	134.8	-69.4	230.5	556.1	259.2	50.6	1.000051	
48500.0	131.4	-69.0	224.3	550.7	257.6	49.2	1.000050	
49000.0	128.2	-66.6	218.3	557.2	256.4	47.9	1.000049	
49500.0	125.0	-68.2	212.4	557.7	254.8	46.5	1.000047	
50000.0	121.9	-66.6	205.5	559.9	253.0	45.0	1.000046	
50500.0	118.8	-65.7	192.0	561.1	251.1	43.6	1.000044	
51000.0	115.9	-65.7	194.6	561.2	250.8	44.7	1.000043	
51500.0	113.1	-65.0	189.2	562.1	250.7	45.9	1.000042	
52000.0	110.3	-62.6	182.5	565.3	251.1	46.1	1.000041	
52500.0	107.6	-62.6	178.1	565.2	252.5	44.5	1.000040	
53000.0	105.0	-62.7	173.8	565.2	254.0	43.0	1.000039	
53500.0	102.5	-62.3	169.3	565.7	256.8	36.0	1.000038	
54000.0	100.0	-61.1	164.3	567.3	261.4	28.2	1.000037	
54500.0	97.6	-59.8	159.3	569.0	267.9	20.9	1.000035	
55000.0	95.2	-59.8	155.5	569.1	277.5	14.4	1.000035	
55500.0	92.9	-60.1	152.0	568.6	300.7	8.8	1.000034	
56000.0	90.7	-60.3	146.6	568.1	266.1	7.7	1.000033	
56500.0	88.5	-60.8	145.2	567.7	263.5	8.1	1.000032	
57000.0	86.4	-61.2	142.0	567.2	248.1	9.9	1.000032	
57500.0	84.3	-61.5	138.8	566.7	241.4	12.4	1.000031	
58000.0	82.3	-61.9	135.7	566.5	237.1	15.1	1.000030	
58500.0	80.3	-60.6	131.6	567.9	237.6	12.7	1.000029	
59000.0	78.4	-60.5	128.4	568.1	239.8	9.4	1.000029	
59500.0	76.5	-61.4	125.8	566.9	240.5	6.3	1.000028	
60000.0	74.6	-62.3	123.3	565.7	229.2	4.0	1.000027	
60500.0	72.8	-62.6	120.5	565.3	193.5	2.1	1.000027	
61000.0	71.1	-62.6	117.6	565.3	178.5	2.6	1.000026	
61500.0	69.3	-62.2	114.5	562.8	171.3	3.2	1.000025	
62000.0	67.7	-61.2	111.2	567.2	187.0	4.0	1.000025	
62500.0	66.1	-60.2	108.0	568.6	205.6	5.7	1.000024	
63000.0	64.5	-60.0	105.3	568.8	217.2	7.8	1.000023	
63500.0	62.2	-60.2	102.9	568.5	224.3	10.8	1.000023	

STATION ALTITUDE 4651.37 FEET MSL
20 DAY 61 00'IRS MD
ASCENSION NO. 06

UPPER AIR DATA
1400140046
L.C.37

TABLE 12 CON'T

GEOPHYSICAL ALTITUDE AGL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEW POINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GR/CUBIC METER	SPEED OF SOUND IN FEET PER SEC	WIND DIRECTION DEGREES (TIN)	WIND SPEED KNOTS	INDEX OF REFRACTION
64000.0	61.4	-60.5			100.6	568.1	228.3	13.8	1.000022
64500.0	59.9	-60.7			98.3	567.8	236.7	16.1	1.000022
65000.0	58.5	-60.6			95.9	567.9	245.7	18.5	1.000021
65500.0	57.1	-59.9			93.3	569.0	252.5	19.5	1.000021
66000.0	55.8	-59.1			90.7	570.0	261.9	12.2	1.000020
66500.0	54.4	-58.3			88.1	571.0	269.6	6.1	1.000020
67000.0	53.1	-57.5			85.9	572.0	10.7	4.0	1.000019
67500.0	51.9	-56.8			83.5	573.1	63.9	7.7	1.000019
68000.0	50.6	-56.0			81.2	574.1	77.9	13.0	1.000018
68500.0	49.4	-55.5			79.1	574.7	92.5	11.0	1.000018
69000.0	48.3	-55.3			77.2	575.0	111.6	9.9	1.000017
69500.0	47.2	-55.1			75.4	575.3	116.5	10.3	1.000017
70000.0	46.1	-54.9			73.6	575.5	110.4	11.2	1.000016
70500.0	45.0	-54.7			71.8	575.8	105.4	12.2	1.000016
71000.0	44.0	-54.5			70.0	576.1	102.0	12.9	1.000016
71500.0	42.9	-54.3			68.4	576.3	99.0	13.8	1.000015
72000.0	41.9	-54.1			66.7	576.6	96.6	13.8	1.000015
72500.0	41.0	-53.9			65.1	576.9	94.5	13.3	1.000014
73000.0	40.0	-53.7			63.5	577.1	91.7	12.9	1.000014
73500.0	39.1	-53.5			62.0	577.4	87.4	12.5	1.000014
74000.0	38.2	-53.3			60.5	577.7	82.6	12.2	1.000013
74500.0	37.3	-53.1			59.0	577.9	80.4	12.3	1.000013
75000.0	36.4	-52.9			57.6	578.2	81.3	12.8	1.000013
75500.0	35.6	-52.7			56.2	578.5	82.2	13.4	1.000013
76000.0	34.8	-52.5			54.9	578.7	82.0	14.1	1.000012
76500.0	34.0	-52.3			53.5	579.0	83.0	14.8	1.000012
77000.0	33.2	-52.1			52.3	579.3	83.3	15.6	1.000012
77500.0	32.4	-51.9			51.0	579.5	H1.9	15.5	1.000011
78000.0	31.6	-51.7			49.8	579.8	H0.5	15.3	1.000011
78500.0	30.9	-51.5			48.6	580.1	79.7	14.5	1.000011
79000.0	30.2	-51.3			47.4	580.3	81.3	11.7	1.000011
79500.0	29.5	-50.9			46.2	580.4	83.9	8.9	1.000010
80000.0	28.8	-50.5			45.1	581.2	84.5	7.3	1.000010
80500.0	28.2	-50.2			44.0	581.7	H1.8	6.8	1.000010
81000.0	27.5	-49.8			42.9	582.2	78.7	6.4	1.000010
81500.0	26.9	-49.4			41.9	582.7	77.5	6.7	1.000009
82000.0	26.3	-49.0			40.9	583.2	80.7	9.6	1.000009
82500.0	25.7	-48.7			39.9	583.7	82.5	12.5	1.000009
83000.0	25.1	-48.3			38.9	584.2	83.6	15.5	1.000009
83500.0	24.5	-47.9			37.9	584.7	90.0	16.6	1.000008

STATION ALTITUDE 4051.37 FFFF mSL
20 MAY 81 0900 IRS MDI
ASCENSION NO. 96

UPPER AIR DATA
1400160090
LC-37
TABLE 12 CON'T

GEODETIC COORDINATES
32°40'17.5 LAT DEG
106°31'23.2 LONG DEG

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. DEW POINT PERCENT	DENSITY gm/CURIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (IN) KNOTS	INDEX OF REFRACTION.
04000.0	24.0	-47.6		57.0	585.0	90.9	1.0000018
04500.0	23.4	-47.5		56.2	585.2	103.0	1.0000008
05000.0	22.9	-47.4		55.3	585.4	110.1	1.0000008
05500.0	22.4	-47.2		54.5	585.5	122.7	1.0000008
06000.0	21.9	-47.1		53.7	585.7	140.2	1.0000008
06500.0	21.4	-47.0		52.9	585.9	161.0	1.0000017
07000.0	20.9	-46.9		52.2	586.0	177.0	1.0000017
07500.0	20.4	-46.7		51.4	586.2	191.1	1.0000017
08000.0	20.0	-46.6		50.7	586.4	202.4	1.0000017
08500.0	19.5	-45.9		29.9	587.2	205.1	1.0000017
09000.0	19.1	-45.3		29.2	588.0	199.3	1.0000016
09500.0	18.7	-44.7		28.5	588.8	191.0	1.0000016
10000.0	18.3	-44.1		27.8	589.6	179.1	1.0000016
10500.0	17.9	-43.4		27.1	590.4	154.4	1.0000016
11000.0	17.5	-42.8		26.4	591.2	124.2	1.0000016
11500.0	17.1	-42.2		25.6	592.0	101.2	1.0000016
12000.0	16.7	-41.6		25.1	592.8	89.0	1.0000016
12500.0	16.4	-41.0		24.5	593.6	62.1	1.0000016
13000.0	16.0	-40.3		23.9	594.4	76.7	1.0000015
13500.0	15.6	-39.7		23.3	595.2	72.9	1.0000015
14000.0	15.3	-39.1		22.8	596.0	71.3	1.0000015
14500.0	15.0	-38.5		22.2	596.8	68.5	1.0000015
15000.0	14.6	-37.8		21.7	597.6	67.2	1.0000015
15500.0	14.3	-37.2		21.1	598.4	68.0	1.0000015
16000.0	14.0	-36.6		20.6	599.2	68.9	1.0000015
16500.0	13.7	-36.0		20.1	600.0	70.2	1.0000014
17000.0	13.4	-35.8		19.7	600.2	73.9	1.0000014
17500.0	13.1	-35.7		19.2	600.3	78.7	1.0000014
18000.0	12.8	-35.7		18.6	600.3	85.2	1.0000014
18500.0	12.5	-35.7		18.4	600.4	95.7	1.0000014
19000.0	12.3	-35.6		18.0	600.4	106.4	1.0000014
19500.0	12.0	-35.6		17.6	600.4	122.5	1.0000014
20000.0	11.8	-35.6		17.2	600.5	124.1	1.0000014
20500.0	11.5	-35.5		16.9	600.5	119.7	1.0000014
21000.0	11.3	-35.5		16.5	600.6	14.2	1.0000014
21500.0	11.0	-35.5		16.1	600.6	98.9	1.0000014
22000.0	10.8	-35.4		15.8	600.7	81.4	1.0000014
22500.0	10.6	-35.4		15.5	600.7	70.6	1.0000013
23000.0	10.3	-35.4		15.1	600.8	9.9	1.0000013
23500.0	10.1	-35.3		14.8	600.8		1.0000013

STATION ALTITUDE 4051.37 FT ET MSL
20 MAY 81 0900 HRS PDT
ASCENSION NO. 96

UPPER AIR DATA
1400160056
LC-37

TABLE 12 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES	REL HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	INDEX OF REFRACTION
10400.0	9.9	-35.1	-35.1	14.5	601.1		1.000003	
104500.0	9.7	-34.6	-34.6	14.1	601.7		1.000003	

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON UEG

STATION ALTITUDE 4051.37 FEET MSL
20 MAY 81 0900 HRS MDT
ASCENSION ISL.

MANDATORY LEVELS
140010009U
LC-37
TABLE 13

GEODETIC COORDINATES,
32°40'17" LAT DEG
106°31'23" LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA DIR/DELTION DEGREES (TN)	WIND SPEED KNOTS
850.0	4936.	14.4	5.5	55.	153.8	9.1
800.0	6606.	11.0	4.8	60.	170.8	17.4
750.0	8378.	12.7	-8.6	22.	197.1	29.0
700.0	10261.	8.0	-17.0	15.	207.3	32.8
650.0	12255.	4.7	-20.0	14.	211.2	36.4
600.0	14371.	-1.2	-17.3	28.	223.8	40.5
550.0	16620.	-7.5	-19.6	37.	219.1	45.2
500.0	19032.	-12.0	-34.7	13.	221.8	37.7
450.0	21657.	-15.1	-36.3	14.	232.1	50.0
400.0	24545.	-21.0	-27.0	58.	242.3	51.0
350.0	27743.	-27.9	-37.6	39.	240.8	47.1
300.0	31317.	-35.7			251.4	46.8
250.0	35376.	-46.6			259.1	40.1
200.0	40066.	-62.3			268.7	43.7
175.0	42751.	-65.6			267.2	47.9
150.0	45794.	-69.1			261.9	48.4
125.0	49351.	-68.2			254.9	46.6
100.0	53830.	-61.1			261.0	28.6
80.0	58386.	-60.4			237.8	12.4
70.0	61099.	-62.6			174.1	2.9
60.0	64246.	-60.7			235.5	15.9
50.0	68007.	-55.6			84.0	12.0
40.0	72693.	-53.7			92.2	13.0
30.0	78795.	-51.2			81.7	11.2
25.0	82710.	-48.2			85.7	15.7
20.0	87553.	-46.6			200.3	15.9
15.0	93928.	-38.5			69.1	19.7
10.0	103171.	-35.3				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4126.59 FEET MSL
 20 MAY 81 0.90 HRS. D
 ASCENSION NO. 105

SIGNIFICANT LEVEL DATA
 14000110105,
 HOLLOWAY
 TABLE 14

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 LONG DEG

PRESSURE (FONETIC) MILLIBARS	ALTITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT
874.2	4126.6	18.0	44.0
876.6	4242.7	18.6	39.0
850.0	4915.0	16.7	45.0
809.6	6273.8	14.9	50.0
766.8	7772.9	10.4	59.0
752.9	8273.6	10.1	58.0
740.4	8731.8	10.8	54.0
730.6	9096.7	11.0	29.0
700.0	10263.3	8.4	24.0
627.6	13191.7	2.0	20.0
561.8	16087.4	-5.7	41.0
539.0	17149.6	-8.6	33.0
500.0	19051.3	-12.2	19.0
464.4	20896.4	-15.6	19.0
448.6	21755.3	-15.7	18.0
424.0	23147.4	-18.4	33.0
416.3	23596.6	-19.5	29.0
400.0	24570.4	-21.2	24.0
381.2	25735.4	-23.2	29.5
352.8	27586.1	-27.3	44.0
326.6	29599.5	-31.6	38.0
313.6	30342.7	-33.1	31.0
300.0	31363.7	-35.6	26.0
294.0	31825.4	-36.8	26.0
275.4	33303.8	-40.4	
250.0	35451.6	-45.7	
200.0	40214.3	-58.2	
159.6	44789.8	-68.0	
150.0	46014.0	-69.6	
141.8	47114.4	-71.3	
133.4	48308.8	-70.0	
129.2	48741.8	-66.6	
121.0	50253.9	-65.4	
117.2	50897.3	-63.5	
112.3	51771.2	-59.2	
109.8	52236.3	-59.5	
105.8	53005.0	-58.1	
100.0	54172.3	-59.7	
94.6	55313.7	-61.1	
70.0	61492.4	-60.8	

STATION ALTITUDE 4126.59 FEET ASL
20 MAY 81 0900 IRS MDI
ASCENSION NO. 105

SIGNIFICANT LEVEL DATA
1400010105
HOLLOWAY
TABLE 14 CON'T

GEODETIC COORDINATES
32.09965 LAT DEG
106.09965 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE METERS MSL	TEMPERATURE AIR DEWPONT DEGREES CENTIGRADE	R.H. PERCENT
			FEET
64.0	63345.9	-57.8	
57.0	65751.7	-59.1	
50.0	68191.6	-55.0	
39.0	73752.8	-53.8	
31.0	79362.1	-51.0	
26.0	82211.7	-44.9	
15.2	94334.9	-41.3	
13.1	9712.2	-36.8	

STATION ALTITUDE 4126.59 FEET MSL
20 MAY 81 6:30 HRS MDT
ASCLUSION NO. 105

WEATHER AIR DATA
1400010105
HOLLOWMAN

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

TABLE 15

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	DATA SPEED KNOTS	INDEX OF REFRACTION
4126.6	874.2	13.0	5.6	1041.9	660.1	170.0	4.1	1.000273
4500.0	862.7	17.9	4.6	41.3	1023.8	665.8	164.5	6.9
5000.0	847.4	16.6	4.7	45.3	1015.0	664.4	161.6	10.6
5500.0	832.4	15.9	4.7	47.2	999.2	663.7	160.3	14.4
6000.0	817.6	15.3	4.6	49.0	983.7	662.9	160.7	18.3
6500.0	805.0	14.2	4.3	51.4	969.6	661.7	163.2	22.7
7000.0	788.6	12.7	3.8	54.4	957.3	660.0	166.5	1.000250
7500.0	774.4	11.2	3.1	57.4	945.2	658.2	171.0	27.5
8000.0	760.5	10.3	2.5	58.5	931.3	657.0	179.0	1.000242
8500.0	746.7	10.4	6	46.1	914.5	657.0	190.9	27.4
9000.0	733.2	10.9	5.8	30.3	897.2	657.3	202.5	1.000219
9500.0	719.9	10.1	7.9	27.3	883.8	656.2	211.3	30.8
10000.0	706.8	9.0	9.9	25.1	871.4	654.9	212.6	1.000213
10500.0	693.8	7.9	11.6	23.7	856.9	653.5	212.6	33.5
11000.0	681.0	6.8	12.9	23.0	846.4	652.2	211.2	1.000200
11500.0	668.5	5.7	14.2	22.3	834.1	650.9	210.6	35.3
12000.0	656.1	4.6	15.4	21.6	822.0	649.6	210.3	35.9
12500.0	644.0	3.5	16.7	20.9	810.1	648.3	210.8	36.8
13000.0	632.1	2.4	18.1	20.3	798.4	647.0	211.4	37.6
13500.0	620.2	1.2	18.0	22.2	786.9	645.5	214.5	39.6
14000.0	608.5	.1	17.4	25.9	775.7	644.0	216.7	41.0
14500.0	597.0	-1.5	17.0	29.5	764.7	642.4	217.3	40.9
15000.0	585.7	-2.8	16.8	33.1	753.9	640.9	218.6	41.9
15500.0	574.6	-4.1	16.7	36.7	743.2	639.3	220.9	44.8
16000.0	563.7	-5.5	16.8	40.4	732.8	637.4	222.4	46.2
16500.0	552.8	-6.8	18.8	37.9	722.4	630.1	223.3	46.2
17000.0	542.2	-8.2	21.2	34.1	712.3	634.4	221.5	43.7
17500.0	531.6	-9.3	23.4	30.4	701.3	633.1	217.3	39.7
18000.0	521.2	-10.2	25.7	26.7	690.2	631.9	215.6	39.1
18500.0	511.0	-11.2	28.1	23.1	679.2	630.7	215.4	40.1
19000.0	501.0	-12.1	30.7	19.4	668.4	629.5	216.3	41.4
19500.0	491.1	-13.0	31.7	19.0	657.5	628.4	218.4	42.9
20000.0	481.4	-13.9	32.5	19.0	646.8	627.3	221.2	44.2
20500.0	471.8	-14.9	33.3	19.0	636.2	626.2	224.7	45.3
21000.0	462.5	-15.6	34.0	18.9	625.4	625.3	228.6	46.6
21500.0	453.2	-15.7	34.3	18.3	613.1	625.2	232.6	48.2
22000.0	444.2	-16.2	33.5	20.6	602.0	624.6	234.6	49.4
22500.0	435.3	-17.1	32.0	26.0	592.1	623.4	235.8	50.5
23000.0	426.5	-18.1	30.9	31.4	582.4	622.3	230.7	51.3
23500.0	417.9	-19.3	24.8	61.3	573.1	621.0	237.4	51.9

STATION ALTITUDE: 4126.55 FT ELL SL
 20 MAY 81 0900 HRS ADT
 ASCENSION NO. 105

UPPER AIR DATA
 1400010105
 HOLLOWAY
 TABLE 15 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TIN)	INDEX OF REFRACTION
24000.0	409.5	-20.2	-24.7	66.9	563.5	619.8	236.8	1.000130
24500.0	401.2	-21.1	-26.0	64.4	554.0	618.7	240.5	1.000128
25000.0	393.0	-21.9	-27.4	61.0	544.6	617.7	242.1	1.000125
25500.0	384.9	-22.8	-28.8	57.6	535.3	616.6	243.7	1.000123
26000.0	377.0	-23.8	-30.4	54.3	526.4	615.3	244.4	1.000120
26500.0	369.2	-24.9	-32.0	51.0	517.9	614.0	244.9	1.000118
27000.0	361.6	-26.0	-33.7	47.8	509.4	612.6	244.7	1.000116
27500.0	354.1	-27.1	-35.5	44.6	501.2	611.2	244.4	1.000113
28000.0	346.6	-28.3	-37.0	42.6	493.0	609.7	245.0	1.000111
28500.0	339.3	-29.5	-38.5	41.0	485.0	608.2	245.7	1.000109
29000.0	332.2	-30.7	-39.9	39.3	477.1	606.7	247.3	1.000107
29500.0	325.2	-31.8	-41.5	37.3	469.2	605.5	248.9	1.000106
30000.0	318.3	-32.6	-43.2	33.5	460.8	604.3	250.2	1.000103
30500.0	311.5	-33.5	-44.9	30.2	452.7	603.1	251.1	1.000102
31000.0	304.8	-34.7	-46.8	27.8	445.2	601.6	251.6	1.000100
31500.0	298.2	-36.0	-48.5	26.0	437.9	600.0	251.9	1.000098
32000.0	291.7	-37.2	-50.6	22.9**	430.7	598.4	252.3	1.000096
32500.0	285.4	-38.4	-55.7	14.1**	423.5	596.9	253.0	1.000095
33000.0	279.1	-39.7	-64.1	5.3**	416.4	595.3	253.7	1.000093
33500.0	273.0	-40.9			409.4	593.7	254.4	1.000091
34000.0	266.9	-42.1			402.4	592.1	255.1	1.000090
34500.0	261.0	-43.4			395.6	590.6	256.3	1.000088
35000.0	255.1	-44.6			388.9	589.0	257.6	1.000087
35500.0	249.4	-45.8			382.2	587.4	259.5	1.000085
36000.0	243.7	-47.1			375.6	585.7	261.7	1.000084
36500.0	238.0	-48.5			369.0	584.0	263.7	1.000082
37000.0	232.5	-49.8			362.6	582.3	265.7	1.000081
37500.0	227.1	-51.1			356.3	580.6	266.2	1.000079
38000.0	221.9	-52.4			350.1	578.8	266.9	1.000078
38500.0	216.7	-53.7			344.0	577.1	265.3	1.000077
39000.0	211.7	-55.0			338.1	575.4	264.2	1.000075
39500.0	206.8	-56.3			332.3	573.7	263.6	1.000074
40000.0	202.0	-57.6			326.6	571.9	265.6	1.000073
40500.0	197.2	-58.8			320.5	570.4	265.9	1.000071
41000.0	192.4	-59.9			314.3	568.9	265.1	1.000070
41500.0	187.7	-61.0			308.2	567.5	266.5	1.000069
42000.0	183.1	-62.0			302.2	566.1	267.9	1.000067
42500.0	178.7	-63.1			296.3	564.6	269.4	1.000066
43000.0	174.3	-64.2			290.6	563.2	268.6	1.000065
43500.0	170.1	-65.2			285.0	561.7	267.3	1.000063

STATION ALTITUDE 4126.59 FEET MSL
20 MAY 81 0900 HRS MT
ASCENSION NO. 105

UPPER AIR DATA
1400010105
HOLLOWMAN
TABLE 15 CON'T

GEODETIC COORDINATES
32°88.865 LAT DEG
106°09.965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CURIC METER	SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	INDEX OF REFRACTION
44000.0	165.9	-66.3	279.5	560.3	265.4	42.1	1.000062
44500.0	161.9	-67.4	274.1	558.8	263.5	44.9	1.000061
45000.0	157.9	-68.3	268.5	557.6	262.3	47.2	1.000060
45500.0	154.0	-68.9	262.6	556.7	261.9	48.8	1.000058
46000.0	150.1	-69.6	256.9	555.8	261.4	50.2	1.000057
46500.0	146.3	-70.4	251.3	554.8	260.5	50.9	1.000056
47000.0	142.6	-71.1	245.9	553.7	259.6	51.7	1.000055
47500.0	139.0	-70.9	239.5	554.1	258.6	51.3	1.000053
48000.0	135.5	-70.3	232.8	554.6	257.6	50.9	1.000052
48500.0	132.1	-69.0	225.4	556.7	256.9	50.0	1.000050
49000.0	128.8	-66.5	217.2	560.0	256.3	48.9	1.000048
49500.0	125.6	-66.1	211.4	560.6	255.5	48.0	1.000047
50000.0	122.5	-65.6	205.7	561.2	254.3	47.6	1.000046
50500.0	119.5	-64.7	199.7	562.5	253.3	47.0	1.000044
51000.0	116.6	-63.0	193.3	564.8	252.7	44.6	1.000043
51500.0	113.8	-60.5	186.5	568.1	252.1	42.3	1.000042
52000.0	111.1	-59.3	181.0	569.6	251.9	38.3	1.000040
52500.0	108.4	-59.0	176.4	570.1	251.7	34.1	1.000039
53000.0	105.8	-58.1	171.4	571.3	251.2	30.1	1.000038
53500.0	103.3	-58.8	167.9	570.4	250.4	26.4	1.000037
54000.0	100.8	-59.5	164.4	569.5	249.3	22.6	1.000037
54500.0	98.4	-60.1	160.9	568.6	247.6	18.9	1.000036
55000.0	96.1	-60.7	157.5	567.8	245.1	15.2	1.000035
55500.0	93.7	-61.1	154.0	567.3	242.4	13.0	1.000034
56000.0	91.5	-61.1	150.3	567.5	238.8	10.8	1.000033
56500.0	89.3	-61.0	146.6	567.4	237.2	10.2	1.000033
57000.0	87.1	-61.0	143.1	567.4	237.4	10.6	1.000032
57500.0	85.0	-61.0	139.6	567.4	237.9	11.1	1.000031
58000.0	83.0	-61.0	136.3	567.5	239.0	12.3	1.000030
58500.0	81.0	-60.9	133.0	567.5	239.9	13.6	1.000030
59000.0	79.0	-60.9	129.7	567.5	240.1	14.2	1.000029
59500.0	77.1	-60.9	126.6	567.6	240.0	14.5	1.000028
60000.0	75.3	-60.9	123.5	567.6	240.1	14.8	1.000028
60500.0	73.5	-60.8	120.6	567.6	240.2	15.4	1.000027
61000.0	71.7	-60.8	117.6	567.7	240.4	15.9	1.000026
61500.0	70.0	-60.8	114.8	567.7	240.6	15.0	1.000026
62000.0	68.3	-60.0	111.6	568.8	240.9	13.7	1.000025
62500.0	66.7	-59.2	108.5	569.9	241.9	12.0	1.000024
63000.0	65.1	-58.4	105.6	571.0	246.4	9.3	1.000023
63500.0	63.5	-57.9	102.8	571.6	254.5	6.8	1.000023

STATION ALTITUDE 4126.59 FEET MSL
20 MAY 81 0900 IRS MD
ASCENSION NO. 105

UPPER AIR DATA
1400010105
HOLLOWAY

TABLE 15 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	GM/CURIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
64000.0	62.0	-58.2	100.5	571.2	262.0	5.0	1.000022	
64500.0	60.5	-58.4	98.2	570.9	271.2	3.6	1.000022	
65000.0	59.1	-58.7	96.0	570.5	285.5	2.5	1.000021	
65500.0	57.7	-59.0	93.8	570.2	278.7	2.9	1.000021	
66000.0	56.3	-58.7	91.5	570.5	273.6	3.3	1.000020	
66500.0	55.0	-58.0	89.0	571.5	337.9	1.4	1.000020	
67000.0	53.7	-57.2	86.6	572.5	54.1	5.4	1.000019	
67500.0	52.4	-56.5	84.3	573.4	61.5	10.3	1.000019	
68000.0	51.2	-55.7	82.0	574.4	68.0	12.1	1.000018	
68500.0	50.0	-55.0	79.8	575.4	72.6	14.1	1.000018	
69000.0	48.8	-54.9	77.9	575.6	77.1	12.9	1.000017	
69500.0	47.7	-54.8	76.1	575.7	87.4	8.0	1.000017	
70000.0	46.6	-54.7	74.2	575.9	122.6	4.0	1.000017	
70500.0	45.5	-54.5	72.5	576.0	145.2	4.1	1.000016	
71000.0	44.4	-54.4	70.7	576.2	154.8	4.8	1.000016	
71500.0	43.4	-54.3	69.1	576.3	5.3	1.000015		
72000.0	42.4	-54.2	67.4	576.5	136.0	5.5	1.000015	
72500.0	41.4	-54.1	65.8	576.6	118.6	6.2	1.000015	
73000.0	40.4	-54.0	64.2	576.8	104.6	8.1	1.000014	
73500.0	39.5	-53.9	62.7	576.9	95.9	10.9	1.000014	
74000.0	38.6	-53.7	61.2	577.1	90.8	13.8	1.000014	
74500.0	37.7	-53.4	59.7	577.5	90.4	13.1	1.000013	
75000.0	36.8	-53.2	58.3	577.8	90.4	11.9	1.000013	
75500.0	35.9	-52.9	56.9	578.1	90.4	10.7	1.000013	
76000.0	35.1	-52.7	55.5	578.5	82.4	9.9	1.000012	
76500.0	34.3	-52.4	54.1	578.8	72.4	9.5	1.000012	
77000.0	33.5	-52.2	52.8	579.1	61.7	9.3	1.000012	
77500.0	32.7	-51.9	51.5	579.4	62.9	11.4	1.000011	
78000.0	32.0	-51.7	50.3	579.8	64.9	13.7	1.000011	
78500.0	31.2	-51.4	49.1	580.1	66.2	16.0	1.000011	
79000.0	30.5	-51.2	47.9	580.4	67.3	14.3	1.000011	
79500.0	29.8	-50.9	46.7	580.8	68.7	11.9	1.000010	
80000.0	29.1	-50.6	45.6	581.2	70.7	9.5	1.000010	
80500.0	28.5	-50.2	44.5	581.7	72.6	10.2	1.000010	
81000.0	27.8	-49.9	43.4	582.1	73.8	11.6	1.000010	
81500.0	27.2	-49.5	42.4	582.6	74.9	12.9	1.000009	
82000.0	26.6	-49.2	41.4	583.0	81.6	14.9	1.000009	
82500.0	26.0	-48.8	40.4	583.5	88.1	17.3	1.000009	
83000.0	25.4	-48.5	39.4	583.9	75.0	19.8	1.000009	
83500.0	24.8	-48.1	38.4	584.4	58.4	21.0	1.000009	

STATION ALTITUDE 4126.59 FEET MSL
 20 MAY 81 09.00 HRS MDT
 ASCENSION NO. 105

UPPER AIR DATA
 1400010105
 HOLLOWAY
 TABLE 15 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
84000.0	24.3	-47.8			37.5	584.8	94.0	21.5	1.000008
84500.0	23.7	-47.5			36.6	585.3	93.7	21.9	1.000008
85000.0	23.2	-47.1			35.7	585.7	94.1	20.8	1.000008
85500.0	22.6	-46.8			34.8	586.2	95.0	18.3	1.000008
86000.0	22.1	-46.4			34.0	586.6	96.3	15.8	1.000008
86500.0	21.6	-46.1			33.2	587.0	100.1	13.2	1.000007
87000.0	21.1	-45.7			32.4	587.5	117.3	10.4	1.000007
87500.0	20.7	-45.4			31.6	587.9	142.5	9.1	1.000007
88000.0	20.2	-45.0			30.8	588.4	169.3	9.9	1.000007
88500.0	19.7	-44.7			30.1	588.8	167.7	9.5	1.000007
89000.0	19.3	-44.4			29.4	589.2	160.5	8.9	1.000007
89500.0	18.9	-44.1			28.7	589.5	152.4	8.5	1.000006
90000.0	18.5	-43.8			28.0	589.9	146.8	8.3	1.000006
90500.0	18.1	-43.6			27.4	590.3	145.3	8.3	1.000006
91000.0	17.7	-43.3			26.7	590.7	143.9	8.3	1.000006
91500.0	17.3	-43.0			26.1	591.1	142.5	8.3	1.000006
92000.0	16.9	-42.7			25.5	591.4	140.5	7.4	1.000006
92500.0	16.5	-42.4			24.9	591.8	137.9	6.5	1.000006
93000.0	16.1	-42.1			24.3	592.2	134.5	5.5	1.000005
93500.0	15.8	-41.8			23.8	592.6	116.6	5.2	1.000005
94000.0	15.4	-41.5			23.2	592.9	92.8	6.1	1.000005
94500.0	15.1	-41.1			22.7	593.5	77.0	7.7	1.000005
95000.0	14.8	-40.4			22.1	594.3			1.000005
95500.0	14.4	-39.7			21.6	595.2			1.000005
96000.0	14.1	-39.1			21.0	596.0			1.000005
96500.0	13.8	-38.4			20.5	596.9			1.000005
97000.0	13.5	-37.7			20.0	597.7			1.000004
97500.0	13.2	-37.1			19.5	598.6			1.000004

STATION ALTITUDE 4126.59 FEET MSL
 20 MAY 81 0900 HRS MDT
 ASCENSION NO. 105

MANDATORY LEVELS
 1400010105
 HOLLOWAY

TABLE 16

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES	REL.HUM. PERCENT	WIND DATA			
				AIR DEGREES	DEWPNT CENTIGRADE	DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4912.	16.7	45.	162.0	10.0		
800.0	6600.	13.9	42.	163.6	23.6		
750.0	8372.	10.3	1.0	187.9	27.4		
700.0	10254.	8.4	-11.0	213.2	32.9		
650.0	12246.	4.1	-16.1	210.5	36.3		
600.0	14361.	-1.1	-17.0	217.1	40.9		
550.0	16612.	-7.2	-19.4	223.5	46.2		
500.0	19025.	-12.2	-31.0	216.7	41.5		
450.0	21646.	-15.7	-34.4	233.8	48.7		
400.0	24520.	-21.2	-26.2	240.7	53.0		
350.0	27725.	-27.7	-36.3	244.6	50.0		
300.0	31302.	-35.6	-48.1	251.8	50.8		
250.0	35375.	-45.7		259.2	46.9		
200.0	40119.	-58.2		263.7	45.0		
175.0	42640.	-64.0		268.8	39.2		
150.0	45892.	-69.6		261.4	50.2		
125.0	49462.	-66.0		255.3	47.9		
100.0	54007.	-59.7		248.9	21.5		
80.0	58560.	-60.9		240.1	14.0		
70.0	61284.	-60.8		240.6	15.1		
60.0	64459.	-58.5		275.8	3.1		
50.0	68236.	-55.0		72.3	13.9		
40.0	72226.	-53.9		100.9	9.1		
30.0	79025.	-51.0		68.1	12.7		
25.0	82941.	-48.3		94.3	20.8		
20.0	87800.	-44.9		171.9	10.0		
15.0	94162.	-40.9		74.9	8.0		

STATION ALTITUDE 4051.00 FEET MSL
20 MAY 81 0900 HRS MDT
ASCENSION NO. 35

SIGNIFICANT LEVEL DATA
1400030035
JALLEN
TABLE 17

GEODETIC COORDINATES
33.16712 LAT UEG
106.49511 LON UEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	REL.HUM. PERCENT
876.0	4051.0	17.9	52.0
859.6	4581.1	16.4	54.0
850.0	4894.7	15.4	56.0
818.8	5931.9	12.5	63.0
798.8	6613.7	12.0	64.0
749.4	8360.3	8.1	73.0
720.2	9440.1	8.3	56.0
700.0	10210.5	6.6	50.0
644.8	12411.2	2.7	33.0
581.4	15128.7	-4.1	23.0
555.6	16300.3	-6.5	39.0
538.4	17105.6	-8.3	18.0
500.0	18983.3	-11.2	18.0
479.8	20019.7	-13.4	17.0
471.8	20440.8	-13.1	17.0
425.0	23030.9	-18.7	38.0
414.9	23620.0	-19.5	74.0
400.0	24511.5	-21.3	71.0
365.8	26663.3	-25.7	58.0
330.4	29062.1	-31.8	54.0
303.6	31014.6	-35.8	37.0

STATION ALTITUDE 4051.00 FEET MSL
20 MAY 01 0900 HRS MDT
ASCENSION NO. 35

UPPER AIR DATA
1400030053
JALLEN

TABLE 18

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SOUND SPEED KNOTS	WIND DATA DIRECTION DEGREES (TN)	INDEX OF REFRACTION
4051.0	876.0	17.9	52.0	1043.7	666.2	180.0	9.9
4500.0	862.1	16.6	7.2	1031.8	664.7	175.8	13.5
5000.0	846.8	15.1	6.6	1018.9	662.9	169.9	17.7
5500.0	831.7	13.7	6.1	1005.6	661.2	167.5	21.9
6000.0	816.8	12.5	5.6	992.1	659.8	166.0	25.0
6500.0	802.1	12.1	5.5	975.5	659.4	165.2	26.2
7000.0	787.6	11.1	5.0	961.1	658.2	165.1	26.5
7500.0	773.3	10.0	4.5	947.3	656.9	160.2	25.7
8000.0	759.3	8.9	4.0	934.1	655.6	169.1	24.9
8500.0	745.6	8.1	3.2	919.8	654.6	174.9	24.7
9000.0	732.0	8.2	1.6	903.0	654.6	180.8	24.7
9500.0	718.6	8.2	-0.2	887.1	654.5	187.7	25.7
10000.0	705.5	7.1	-2.2	874.6	653.0	194.0	27.0
10500.0	692.5	6.1	-4.1	861.8	651.8	197.1	29.8
11000.0	679.7	5.2	-6.1	848.8	650.7	197.8	33.5
11500.0	667.1	4.3	-8.1	836.0	649.5	198.4	37.0
12000.0	654.8	3.4	-10.1	823.4	648.4	198.8	40.3
12500.0	642.6	2.5	-12.3	811.1	647.2	200.2	42.0
13000.0	630.5	1.2	-14.1	800.6	645.7	202.3	42.5
13500.0	618.6	0.0	-15.9	799.5	645.7	205.1	43.5
14000.0	606.9	-1.3	-17.8	788.2	644.2	205.1	43.5
14500.0	595.5	-2.5	-19.7	777.0	642.7	208.0	44.8
15000.0	584.3	-3.8	-21.6	765.9	641.1	211.4	47.1
15500.0	573.1	-4.9	-20.5	755.1	639.6	214.6	49.9
16000.0	562.1	-5.9	-18.9	743.6	638.4	216.9	52.6
16500.0	551.3	-6.9	-20.2	732.0	637.2	218.7	55.2
17000.0	540.6	-6.1	-26.6	720.8	635.9	218.7	55.9
17500.0	530.1	-8.9	-28.8	710.1	634.4	218.0	55.8
18000.0	519.8	-9.7	-29.5	698.6	633.4	218.0	54.7
18500.0	509.6	-10.5	-30.1	687.0	632.5	213.9	53.6
19000.0	499.7	-11.2	-30.8	675.6	631.5	214.6	53.6
19500.0	489.8	-12.3	-31.9	664.4	630.6	215.6	53.7
20000.0	480.2	-13.4	-33.1	653.9	629.3	218.2	54.4
20500.0	470.7	-13.2	-32.7	643.7	628.0	220.6	55.1
21000.0	461.3	-14.3	-31.5	630.6	628.2	222.4	55.2
21500.0	452.1	-15.4	-30.6	620.6	626.9	224.1	55.4
22000.0	443.0	-16.5	-30.1	610.7	625.6	225.7	55.7
22500.0	434.2	-17.6	-29.7	601.0	624.3	227.3	55.9
23000.0	425.5	-18.6	-29.4	591.5	623.0	228.8	56.1
23500.0	416.9	-19.3	-23.9	582.2	621.7	230.5	56.2
				571.8	620.9	232.6	55.7

STATION ALTITUDE 4051.00 FEET MSL
 20 MAY 81 0900 HRS MDT
 ASCENSION NO. 35

UPPER AIR DATA
 1400030035
 JALLEN
 TABLE 18 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE POINT DEGREES CENTIGRADE	REL.HUM. PERCENT	SPEED OF SOUND KILOTS METER	WIND DATA DIRECTION DEGREES (TN)	INDEX OF REFRACTION
24000.0	406.5	-20.3	-23.9	72.7	562.3	619.8
24500.0	400.2	-21.3	-25.1	71.0	553.1	618.5
25000.0	392.0	-22.3	-26.6	68.0	544.0	617.2
25500.0	383.9	-23.3	-28.0	65.0	535.0	615.9
26000.0	376.0	-24.3	-29.5	62.0	526.2	614.7
26500.0	368.3	-25.4	-31.0	59.0	517.5	613.4
27000.0	360.6	-26.6	-32.4	57.4	509.2	611.9
27500.0	352.0	-27.8	-33.7	56.6	501.1	610.3
28000.0	345.6	-29.1	-35.1	55.8	493.2	608.7
28500.0	338.4	-30.4	-36.4	54.9	485.4	607.1
29000.0	331.3	-31.6	-37.8	54.1	477.7	605.5
29500.0	324.2	-32.7	-39.5	50.2	469.6	604.2
30000.0	317.2	-33.7	-41.3	45.8	461.5	602.9
30500.0	310.4	-34.7	-43.2	41.5	453.6	601.6
31000.0	303.8	-35.8	-45.1	37.1	445.8	600.3

STATION ALTITUDE 4051.00 FEET MSL
20 MAY 61 0900 HRS RDT
ASCENSION NO. 35

AERONAUTICAL LEVELS
14J0030055
JALLEN
TABLE 19

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE			WIND DATA	
		DEGREES	AIR DEGREES	DEWPOINT CENTIGRADE	KEL. HUM. PERCENT	DIRECTION DEGREES (TN)
850.0	4891.	15.4	6.7	56.	170.6	16.8
800.0	6567.	12.0	5.4	64.	165.0	26.4
750.0	8332.	8.1	3.6	73.	173.0	24.8
700.0	10201.	6.6	-3.1	50.	196.4	27.7
650.0	12185.	3.1	-11.0	35.	198.9	41.6
600.0	14293.	-2.0	-18.9	26.	210.0	46.1
550.0	16540.	-7.1	-20.8	32.	218.6	55.9
500.0	18958.	-11.2	-30.7	18.	215.5	53.6
450.0	21589.	-15.6	-30.5	27.	226.0	55.7
400.0	24472.	-21.3	-25.1	71.	236.1	55.5
350.0	27662.	-28.3	-34.3	56.	237.5	63.0

STATION NUMBER 3030.000
20 MILE 01
ASSEMBLY 40, 251

SIGNIFICANT LEVEL DATA
14000±0551
WHITE SANDS

ELEVATIC COORDINATES
32°40'04.3 LAT DEG
106°37'03.3 LONG DEG

TABLE 20

PRESSURE MILLIBARS	GROMETRIC ALITUDE MILLIBARS MSL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
678.9	3989.0	20.3	6.3	40.0
696.0	4929.8	16.0	6.4	53.0
794.6	6796.6	11.1	5.4	68.0
791.0	6921.2	10.6	4.9	68.0
776.2	7442.4	14.3	4.3	51.0
767.0	7773.0	14.1	-5.0	25.0
766.0	10279.4	8.6	-13.7	19.0
677.4	11168.6	7.5	-15.9	17.0
625.8	13290.3	2.1	-19.1	19.0
542.6	17003.6	-8.2	-19.7	39.0
526.4	17774.6	-10.2	-26.4	25.0
500.0	19072.6	-12.5	-32.4	17.0
487.2	19722.2	-13.8	-33.5	17.0
472.0	20514.8	-13.5	-33.9	16.0
449.0	21760.5	-15.3	-32.6	21.0
434.6	22568.5	-16.7	-28.8	34.0
427.0	23003.9	-17.6	-24.6	54.0
400.0	24605.0	-20.3	-28.4	48.0
311.0	30576.4	-33.9	-49.9	18.0
300.0	31403.1	-36.3		
274.8	33385.3	-41.5		
256.0	35477.0	-46.3		
235.8	36747.0	-49.8		
200.0	40231.0	-5.0		
177.0	42731.1	-64.3		
162.1	44488.1	-68.1		
157.9	45008.8	-67.4		
150.0	46022.9	-69.7		
142.3	47053.0	-71.8		
138.5	47583.0	-69.0		
132.0	48530.0	-69.4		
130.1	48816.7	-67.4		
124.8	49643.8	-67.2		
119.6	50497.0	-64.1		
116.0	51113.4	-64.7		
110.6	52044.9	-61.2		
105.7	53007.9	-62.1		
100.0	54146.1	-59.3		
92.0	55866.7	-60.0		
89.0	56547.6	-61.4		

STATION ALTITUDE 3489.00 FEET MSL
20 MAY 81
ASCESSION NO. 351

SIGNIFICANT LEVEL DATA
14000±0351
WHITE SANDS MDI
TABLE 20 CON'T

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE METERS MSL FEEt	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
80.6	58584.8	-59.8	
70.0	61483.6	-61.3	
67.6	62197.6	-61.8	
65.8	62752.6	-59.3	
59.4	64871.4	-58.9	
57.2	65659.2	-55.9	
50.0	68494.5	-54.8	
45.4	70541.7	-53.2	
39.5	73500.0	-54.1	
36.8	75131.4	-50.3	
30.0	79431.4	-49.5	
21.6	86604.3	-46.2	
20.0	88307.8	-43.5	
14.0	96393.3	-35.4	
11.7	100538.1	-35.0	
10.0	104202.8	-30.5	
8.6	10738.3	-33.1	
7.0	112579.7	-29.1	
5.2	119686.0	-25.4	

ELEVATICN COORDINATES
32°40'04.3 LAT UEG
106°37'03.3 LONG UEG

STATION ALTITUDE 3989.00 FEET MSL
20 MAY 81 1000 IRS WDT
ASCENSION NO. 351

UPPER AIR DATA
1400020351
WHITE SANDS
TABLE 21

GEOPOTENTIAL COORDINATES
32°40'04.3 LAT LEG
106°37'03.3 LON LEG

GEOPOTENTIAL PRESSURE	ALTITUDE WSL FEET	AIR DEWPOINT CENTIGRANE	REL.HUM. PERCENT	DEPTH GM/CUBIC METER	DEPTH KNOBS	DIRECTION DEGREES	WIND SPEED KNOTS	WIND DATA DIRECTION DEGREES	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3939.0	878.9	20.3	60.3	40.0	1039.1	668.7	105.0	105.0	6.0	1.000274
4000.0	878.6	20.2	6.3	40.2	1038.9	668.7	184.7	6.1	1.000274	
4500.0	865.1	18.0	6.5	47.1	1028.4	666.1	176.1	8.0	1.000273	
5000.0	847.8	15.8	6.4	53.6	1017.7	665.7	170.9	10.1	1.000271	
5500.0	832.7	14.5	6.2	57.6	1004.1	662.2	167.6	12.1	1.000267	
6000.0	817.8	13.2	6.0	61.6	990.6	660.7	167.9	13.2	1.000264	
6500.0	803.2	11.9	5.7	65.6	977.4	659.1	174.9	17.6	1.000260	
7000.0	785.7	11.2	4.9	65.4	962.4	658.3	183.4	23.1	1.000255	
7500.0	774.6	14.3	3.0	46.5	935.4	661.7	192.3	26.8	1.000243	
8000.0	760.7	13.6	-6.3	24.5	922.4	660.3	198.1	26.4	1.000223	
8500.0	745.9	12.5	-7.9	23.3	909.4	659.0	202.7	26.4	1.000218	
9000.0	732.4	11.4	-9.5	22.1	896.5	657.7	205.3	26.6	1.000214	
9500.0	720.2	10.3	-11.1	20.9	883.9	656.4	209.5	27.9	1.000209	
10000.0	707.2	9.2	-12.8	19.7	871.4	655.0	214.2	30.0	1.000205	
10500.0	694.3	8.3	-14.2	18.5	858.4	654.0	216.6	33.1	1.000201	
11000.0	681.6	7.7	-15.5	17.4	844.6	653.2	218.4	36.4	1.000197	
11500.0	669.1	6.7	-16.4	17.3	832.2	652.0	217.0	37.4	1.000194	
12000.0	656.7	5.4	-17.1	17.8	820.6	650.5	215.6	38.3	1.000191	
12500.0	644.5	4.1	-17.9	18.3	809.1	649.0	214.9	38.2	1.000188	
13000.0	632.6	2.8	-19.6	18.7	797.9	647.5	214.3	37.9	1.000185	
13500.0	620.8	1.5	-18.9	20.1	786.7	645.9	215.5	38.9	1.000182	
14000.0	609.0	.1	-18.6	22.8	775.6	644.3	216.9	40.0	1.000180	
14500.0	597.4	-1.3	-18.5	25.5	764.7	642.7	218.6	41.6	1.000178	
15000.0	586.0	-2.6	-18.5	28.2	754.0	641.0	219.9	43.5	1.000175	
15500.0	574.9	-4.0	-18.6	30.9	743.5	639.4	220.0	44.1	1.000173	
16000.0	563.9	-5.4	-18.9	33.6	733.1	637.7	220.0	44.3	1.000171	
16500.0	553.2	-6.8	-19.2	36.3	722.9	636.1	219.8	43.7	1.000168	
17000.0	542.7	-8.2	-19.7	39.0	712.9	634.4	219.9	41.7	1.000166	
17500.0	532.1	-9.5	-23.8	30.0	702.6	632.8	220.5	38.6	1.000161	
18000.0	521.7	-10.6	-27.4	23.6	691.9	631.4	220.8	36.6	1.000158	
18500.0	511.5	-11.5	-29.6	20.5	680.7	630.3	221.5	35.5	1.000155	
19000.0	501.4	-12.4	-32.0	17.4	669.7	629.2	225.0	38.3	1.000151	
19500.0	491.5	-13.4	-33.1	17.0	658.9	628.0	228.5	41.0	1.000149	
20000.0	481.8	-13.7	-33.6	16.6	640.8	627.6	232.2	43.7	1.000146	
20500.0	472.3	-13.5	-33.9	16.0	633.5	627.8	234.0	45.9	1.000143	
21000.0	462.9	-14.2	-33.3	17.9	622.6	627.0	234.7	47.8	1.000141	
21500.0	453.7	-14.9	-32.8	20.0	611.9	626.1	234.8	49.4	1.000138	
22000.0	444.7	-15.7	-31.2	24.9	601.5	625.2	234.9	50.9	1.000137	
22500.0	435.8	-16.6	-29.1	32.9	591.4	624.2	236.0	50.9	1.000135	
23000.0	427.1	-17.6	-24.7	53.8	581.7	625.0	237.1	51.0	1.000134	

STATION ALTITUDE 3989.00 FT EET MSL
20 MAY 81 1000 HRS MDT
ASCENSION NO. 351

UPPER AIR DATA
1400020351
WHITE SANDS
TABLE 21 CON'T

GEODETIC COORDINATES
32°40'04.3 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES TN	SPEED KNOTS	INDEX OF REFRACTION
24500.0	416.4	-18.4	-25.8	52.1	571.9	622.0	238.8	49.8
24000.0	410.0	-19.3	-27.0	50.3	562.3	620.9	240.5	48.6
24500.0	401.7	-20.1	-28.2	48.4	552.8	619.9	242.1	47.7
25000.0	393.4	-21.2	-29.7	46.0	543.7	618.5	243.7	47.0
25500.0	385.2	-22.3	-31.3	43.5	534.8	617.1	243.6	48.3
26000.0	377.2	-23.5	-33.0	41.0	526.0	615.7	243.0	50.2
26500.0	369.3	-24.6	-34.7	38.5	517.5	614.3	242.4	51.4
27000.0	361.6	-25.8	-36.4	36.0	509.0	612.8	241.7	52.5
27500.0	354.1	-26.9	-38.1	33.5	500.7	611.4	242.5	51.9
28000.0	346.7	-28.0	-37.9	30.9	492.6	610.0	243.5	51.2
28500.0	339.4	-29.2	-41.7	28.4	484.6	608.6	244.9	50.4
29000.0	332.4	-30.3	-43.5	25.9	476.7	607.1	246.4	49.7
29500.0	325.4	-31.4	-45.4	23.4	469.0	605.7	247.5	49.3
30000.0	318.6	-32.6	-47.4	20.9	461.4	604.3	248.5	49.1
30500.0	312.0	-33.7	-49.5	18.4	453.9	602.8	249.3	48.7
31000.0	305.3	-35.1	-56.8	8.8**	446.8	601.0	250.2	48.3
31500.0	298.7	-36.6			439.8	599.2	251.2	47.8
32000.0	292.2	-37.9			432.6	597.6	252.6	47.3
32500.0	285.8	-39.2			425.5	595.9	254.3	46.8
33000.0	279.5	-40.5			418.5	594.2	256.0	46.4
33500.0	273.4	-41.8			411.6	592.6	258.5	46.1
34000.0	267.3	-42.9			404.4	591.1	261.1	46.0
34500.0	261.3	-44.1			397.3	589.7	263.2	46.2
35000.0	255.5	-45.2			390.4	588.2	265.0	46.8
35500.0	249.7	-46.4			383.6	586.7	266.7	47.3
36000.0	244.1	-47.7			377.2	584.9	268.3	48.0
36500.0	238.5	-49.1			370.9	583.1	269.6	48.3
37000.0	233.0	-50.4			364.4	581.4	270.6	48.3
37500.0	227.6	-51.6			357.8	579.9	270.9	48.1
38000.0	222.2	-52.7			351.3	578.4	270.6	47.7
38500.0	217.1	-53.9			344.9	576.8	270.5	47.6
39000.0	212.0	-55.1			338.7	575.3	270.5	47.5
39500.0	207.0	-56.3			332.6	573.7	270.9	47.4
40000.0	202.2	-57.5			326.6	572.2	271.8	47.1
40500.0	197.4	-58.7			320.6	570.5	271.6	46.8
41000.0	192.6	-59.9			314.7	568.9	271.2	46.4
41500.0	188.0	-61.2			309.0	567.2	270.8	45.7
42000.0	183.4	-62.5			303.3	565.5	270.5	44.9
42500.0	179.0	-63.7			297.8	563.8	270.0	43.9
43000.0	174.6	-64.9			292.1	562.2	271.5	43.0

* At least one assumed relative humidity value was used in the interpolation.

STATION ALTITUDE 3,989.00 FEET MSL
 20 MAY 81 100 HRS AD
 ASCENSION NO. 351

UPPER AIR DATA
 1400020.51
 WHITE SANDS
 TABLE 21 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	170.3	-66.0	296.4	560.0	272.3	42.0	1.000064	
44000.0	166.1	-67.0	280.8	559.3	270.6	41.1	1.000063	
44500.0	162.0	-68.1	275.2	557.9	268.8	40.2	1.000061	
45000.0	158.6	-67.4	267.5	558.8	265.6	40.7	1.000060	
45500.0	154.0	-68.5	262.2	557.3	262.1	41.8	1.000058	
46000.0	150.2	-69.6	257.1	555.8	259.9	43.6	1.000057	
46500.0	146.4	-70.7	251.9	554.4	258.8	45.9	1.000056	
47000.0	142.7	-71.7	246.7	553.0	257.9	47.9	1.000055	
47500.0	139.1	-69.4	237.9	556.0	257.9	48.0	1.000053	
48000.0	135.6	-69.2	231.6	556.4	257.8	48.1	1.000052	
48500.0	132.2	-69.4	226.0	555.1	257.7	47.3	1.000050	
49000.0	128.9	-67.4	218.2	558.9	257.5	46.2	1.000049	
49500.0	125.7	-67.2	212.7	559.0	257.3	45.1	1.000047	
50000.0	122.6	-65.9	206.1	560.8	257.0	44.5	1.000046	
50500.0	119.6	-64.1	199.3	563.3	256.8	43.8	1.000044	
51000.0	116.7	-64.6	194.8	562.6	256.8	42.9	1.000043	
51500.0	113.8	-63.2	188.9	564.4	257.0	41.9	1.000042	
52000.0	111.0	-61.4	182.7	566.9	257.3	40.4	1.000041	
52500.0	108.4	-61.6	178.5	566.6	258.3	37.2	1.000040	
53000.0	105.7	-62.1	174.5	566.0	259.5	34.0	1.000039	
53500.0	103.2	-60.9	169.4	567.6	259.8	30.1	1.000038	
54000.0	100.7	-59.7	164.3	569.2	259.5	25.8	1.000037	
54500.0	98.3	-59.4	160.2	569.5	258.8	21.7	1.000036	
55000.0	95.9	-59.6	156.6	569.2	255.7	18.6	1.000035	
55500.0	93.6	-59.9	153.0	569.0	251.3	15.6	1.000034	
56000.0	91.4	-60.3	149.6	568.4	249.3	12.9	1.000033	
56500.0	89.2	-61.3	146.7	567.0	249.2	10.4	1.000033	
57000.0	87.1	-61.0	143.0	567.4	249.1	8.2	1.000032	
57500.0	85.0	-60.7	139.3	567.9	249.6	7.7	1.000031	
58000.0	82.9	-60.3	135.7	568.4	250.2	7.2	1.000030	
58500.0	80.9	-59.9	132.2	569.0	242.1	8.1	1.000029	
59000.0	79.0	-60.0	129.1	568.8	233.5	9.9	1.000029	
59500.0	77.1	-60.3	126.2	568.4	227.5	11.8	1.000028	
60000.0	75.2	-60.5	123.3	568.1	221.6	12.3	1.000027	
60500.0	73.4	-60.8	120.5	567.7	216.4	12.7	1.000027	
61000.0	71.7	-61.0	117.7	567.4	212.3	12.8	1.000026	
61500.0	69.9	-61.3	115.0	567.0	213.9	10.7	1.000026	
62000.0	68.3	-61.7	112.4	568.0	216.1	8.7	1.000025	
62500.0	66.6	-60.4	109.1	568.2	220.7	7.9	1.000024	
63000.0	65.0	-59.3	105.9	569.8	226.4	8.2	1.000024	

STATION ALTITUDE 3989.00 FEET MSL
20 MAY 81 1000 IRS DT
ASCENSION NO. 351

UPPER AIR DATA
1400020351
WHITE SANDS
TABLE 21 CON'T

GEODETIC COORDINATES
32.40043 LAT UEG
106.37033 LON UEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	63.5	-59.2	103.3	569.9	231.8	8.5	1.000023	
64000.0	64.0	-59.1	100.8	570.0	241.0	8.3	1.000022	
64500.0	60.5	-59.0	98.4	570.1	250.5	8.3	1.000022	
65000.0	59.0	-58.4	95.8	570.9	259.6	6.2	1.000021	
65500.0	57.6	-56.5	92.7	573.4	296.5	2.2	1.000021	
66000.0	56.3	-55.8	90.2	574.4	36.1	3.8	1.000020	
66500.0	55.0	-55.6	88.0	574.6	66.1	7.8	1.000020	
67000.0	53.7	-55.4	85.9	574.9	76.5	12.5	1.000019	
67500.0	52.4	-55.2	83.8	575.2	81.2	17.0	1.000019	
68000.0	51.2	-55.0	81.7	575.4	85.9	15.1	1.000018	
68500.0	50.0	-54.8	79.7	575.7	92.0	13.4	1.000018	
69000.0	48.8	-54.4	77.8	576.2	100.3	11.4	1.000017	
69500.0	47.7	-54.0	75.8	576.7	115.3	8.7	1.000017	
70000.0	46.6	-53.6	73.9	577.2	140.1	7.0	1.000016	
70500.0	45.5	-53.2	72.1	577.7	148.3	6.7	1.000016	
71000.0	44.4	-53.3	70.4	577.6	131.8	7.0	1.000016	
71500.0	43.4	-53.5	68.8	577.4	117.3	7.7	1.000015	
72000.0	42.4	-53.6	67.3	577.2	110.1	8.0	1.000015	
72500.0	41.4	-53.8	65.8	577.0	104.4	8.2	1.000015	
73000.0	40.4	-53.9	64.3	576.8	100.5	8.2	1.000014	
73500.0	39.5	-54.1	62.8	576.6	103.3	7.1	1.000014	
74000.0	38.6	-52.9	61.0	578.1	107.1	5.9	1.000014	
74500.0	37.7	-51.8	59.3	579.6	100.6	6.2	1.000013	
75000.0	36.8	-50.6	57.6	581.2	90.1	7.8	1.000013	
75500.0	35.0	-50.2	56.2	581.7	83.2	9.6	1.000013	
76000.0	34.2	-50.1	54.9	581.8	87.5	9.3	1.000012	
76500.0	34.4	-50.0	53.6	581.9	95.1	8.9	1.000012	
77000.0	33.6	-50.0	52.4	582.0	98.2	8.6	1.000012	
77500.0	32.8	-49.9	51.2	582.1	99.9	8.4	1.000011	
78000.0	32.1	-49.8	50.0	582.3	99.0	8.3	1.000011	
78500.0	31.3	-49.7	48.8	582.4	98.7	8.4	1.000011	
79000.0	30.6	-49.6	47.7	582.5	92.6	9.9	1.000011	
79500.0	29.9	-49.5	46.6	582.7	88.1	11.4	1.000010	
80000.0	29.2	-49.2	45.5	583.0	86.2	13.1	1.000010	
80500.0	28.6	-49.0	44.4	583.3	89.3	15.2	1.000010	
81000.0	27.9	-48.8	43.3	583.6	91.7	17.4	1.000010	
81500.0	27.3	-48.5	42.3	583.9	94.5	19.0	1.000009	
82000.0	26.7	-48.3	41.3	584.1	100.6	18.9	1.000009	
82500.0	26.1	-48.1	40.3	584.4	107.0	19.1	1.000009	
83000.0	25.5	-47.9	39.4	584.7	112.9	18.8	1.000009	

STATION ALTITUDE 3989.00 FT ET MSL
 20 MAY 81 1000 HRS PDT
 ASCENSION NO. 551

UPPER AIR DATA
 1400020351
 WHITE SANDS

TABLE 21 CON'T

GEOGRAPHIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CURRIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
83500.0	24.9	-47.6			38.5	585.0	119.4	16.6	1.000009
84000.0	24.3	-47.4			37.6	585.3	127.0	14.6	1.000008
84500.0	23.8	-47.2			36.7	585.6	135.8	13.2	1.000008
85000.0	23.2	-46.9			35.8	585.9	127.4	11.3	1.000008
85500.0	22.7	-46.7			35.0	586.2	118.7	9.7	1.000008
86000.0	22.2	-46.5			34.1	586.5	108.4	8.5	1.000008
86500.0	21.7	-46.2			33.3	586.8	101.1	8.1	1.000007
87000.0	21.2	-45.6			32.5	587.7	93.1	7.8	1.000007
87500.0	20.7	-44.8			31.6	588.7	85.5	7.7	1.000007
88000.0	20.3	-44.9			30.8	589.7	86.5	7.4	1.000007
88500.0	19.8	-45.3			30.1	590.6	87.4	7.2	1.000007
89000.0	19.4	-42.8			29.3	591.3	88.5	6.9	1.000007
89500.0	19.0	-42.3			28.6	591.9	84.2	6.9	1.000006
90000.0	18.6	-41.8			28.0	592.6	79.4	7.1	1.000006
90500.0	18.2	-41.3			27.3	593.2	74.7	7.2	1.000006
91000.0	17.8	-40.8			26.6	593.8	72.7	7.5	1.000006
91500.0	17.4	-40.3			26.0	594.5	72.1	7.2	1.000006
92000.0	17.0	-39.8			25.4	595.1	71.5	8.3	1.000006
92500.0	16.6	-39.3			24.8	595.7	70.4	8.7	1.000006
93000.0	16.3	-38.6			24.2	596.4	88.1	9.4	1.000005
93500.0	15.9	-38.3			23.6	597.0	97.8	10.5	1.000005
94000.0	15.6	-37.8			23.0	597.7	104.3	11.5	1.000005
94500.0	15.2	-37.3			22.5	598.3	104.3	11.5	1.000005
95000.0	14.9	-36.8			21.9	598.9	104.4	11.4	1.000005
95500.0	14.6	-36.3			21.4	599.6	104.4	11.4	1.000005
96000.0	14.2	-35.8			20.9	600.2	101.4	10.6	1.000005
96500.0	13.9	-35.4			20.4	600.7	97.7	9.9	1.000005
97000.0	13.6	-35.0			20.0	601.0	107.7	11.1	1.000004
97500.0	13.3	-35.3			19.5	600.8	95.3	9.3	1.000004
98000.0	13.1	-35.2			19.1	600.9	100.0	9.8	1.000004
98500.0	12.8	-35.2			18.7	601.0	104.1	10.4	1.000004
99000.0	12.5	-35.1			18.3	601.0	107.7	11.1	1.000004
99500.0	12.2	-35.1			17.9	601.1	110.9	11.8	1.000004
100000.0	12.0	-35.1			17.5	601.1	113.7	12.5	1.000004
100500.0	11.7	-35.0			17.1	601.2	116.3	13.2	1.000004
101000.0	11.5	-34.4			16.7	601.9	119.7	13.9	1.000004
101500.0	11.2	-33.8			16.3	602.7	122.7	14.7	1.000004
102000.0	11.0	-33.2			16.0	603.5	125.5	15.4	1.000004
102500.0	10.8	-32.6			15.6	604.2	127.5	15.2	1.000003
103000.0	10.5	-32.0			15.2	605.0	129.4	14.8	1.000003

GEODETIC COORDINATES
 32°40'43" LAT DEG
 106°37'03" LONG DEG

STATION ALTITUDE 3989.00 FEET MSL
 20 MAY 81 10 AM HRS PDT
 ASCESSION NO. 551

UPPER AIR DATA
 1400020351
 WHITE SANDS
 TABLE 21 CON'T

GEODETIC COORDINATES
 32°40'04.3 LAT DEG
 106°37'03.3 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CURIC METER	SOUND SPEED KNOTS	WIND DIRECTION DEGREES(TT)	WIND SPEED KNOTS	INDEX OF REFRACTION
103500.0	10.3	-31.4		14.8	605.8	131.4	14.3	1.000003
104000.0	10.1	-30.7		14.5	606.5	133.5	13.8	1.000003
104500.0	9.9	-30.7		14.2	606.6	135.7	12.9	1.000003
105000.0	9.7	-31.1		13.9	606.1	138.2	12.1	1.000003
105500.0	9.5	-31.5		13.6	605.7	141.1	11.3	1.000003
106000.0	9.3	-31.8		13.4	605.2	144.3	10.7	1.000003
106500.0	9.1	-32.2		13.1	604.7	147.3	10.5	1.000003
107000.0	8.9	-32.6		12.9	604.3	150.4	10.3	1.000003
107500.0	8.7	-32.9		12.6	603.8	153.6	10.2	1.000003
108000.0	8.5	-32.9		12.3	603.9	155.0	10.0	1.000003
108500.0	8.3	-32.5		12.1	604.4	152.6	9.8	1.000003
109000.0	8.2	-32.1		11.8	604.9	150.1	9.7	1.000003
109500.0	8.0	-31.6		11.5	605.4	147.5	9.5	1.000003
110000.0	7.8	-31.2		11.2	605.9	142.7	9.5	1.000003
110500.0	7.6	-30.8		11.0	606.5	134.6	10.1	1.000002
111000.0	7.5	-30.4		10.7	607.0	127.6	10.9	1.000002
111500.0	7.3	-30.0		10.5	607.5	121.5	11.8	1.000002
112000.0	7.2	-29.6		10.3	608.0	114.8	15.1	1.000002
112500.0	7.0	-29.2		10.0	608.5	107.1	14.8	1.000002
113000.0	6.9	-28.9		9.8	608.9	101.2	16.8	1.000002
113500.0	6.7	-28.6		9.6	609.2	96.5	19.0	1.000002
114000.0	6.6	-28.4		9.4	609.5	93.5	21.1	1.000002
114500.0	6.5	-28.1		9.2	609.8	92.1	22.9	1.000002
115000.0	6.3	-27.8		9.0	610.2	91.0	24.8	1.000002
115500.0	6.2	-27.6		8.8	610.5	80.7	1.000002	
116000.0	6.1	-27.3		8.6	610.8	81.0	1.000002	
116500.0	5.9	-27.1		8.4	611.1	81.1	1.000002	
117000.0	5.8	-26.8		8.2	611.5	81.5	1.000002	
117500.0	5.7	-26.5		8.0	611.8	81.8	1.000002	
118000.0	5.6	-26.3		7.9	612.1	7.9	1.000002	
118500.0	5.5	-26.0		7.7	612.4	7.7	1.000002	
119000.0	5.4	-25.8		7.5	612.8	7.5	1.000002	
119500.0	5.2	-25.5		7.4	613.1	7.4	1.000002	

STATION ALTITUDE 3939.00 FEET MSL
 20 MAY 81 1000 HRS UTC
 ASCENSION NO. 351

MANDATORY LEVELS
 1400020351
 WHITE SANDS
 TABLE 22

PRESSURE MILLIBARS	GEO-POTENTIAL FEET	AIR DEGREES CENTIGRADE	TEMPERATURE DEGREES CENTIGRADE	DEWPNT AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	WIND DIA. DIRECTION DEGREES(TIN)	SPEED KNOTS
850.0	4926.	16.0	6.4	5.3	171.5	9.8	
800.0	6605.	11.6	5.6	6.6	176.5	19.1	
750.0	8385.	12.8	-7.5	24.	202.1	26.4	
700.0	10269.	8.6	-13.7	19.	215.7	31.6	
650.0	12266.	4.7	-17.5	18.	215.2	38.3	
600.0	14384.	-9	-18.5	25.	218.3	41.4	
550.0	16635.	-7.2	-19.4	37.	219.7	43.5	
500.0	19045.	-12.5	-32.4	17.	225.4	38.6	
450.0	21672.	-15.2	-32.6	21.	234.9	50.0	
400.0	24564.	-20.3	-28.4	48.	242.4	47.6	
350.0	27763.	-27.5	-39.1	32.	243.1	51.4	
300.0	31340.	-36.3			250.9	48.0	
250.0	35599.	-46.3			266.5	47.3	
200.0	40134.	-58.0			272.2	47.1	
175.0	42850.	-64.8			271.4	43.1	
150.0	45899.	-69.7			259.9	43.6	
125.0	49470.	-67.2			257.3	45.0	
100.0	53979.	-59.3			259.4	24.8	
80.0	58515.	-59.9			238.1	8.9	
70.0	61272.	-61.3			213.8	10.9	
60.0	64431.	-58.9			252.9	8.3	
50.0	68236.	-54.8			91.4	13.5	
40.0	72940.	-54.0			101.5	7.7	
30.0	79091.	-49.5			88.9	11.1	
25.0	83025.	-47.7			117.4	17.2	
20.0	87891.	-43.5			87.0	7.3	
15.0	94531.	-37.0			104.4	11.4	
10.0	103633.	-30.5			134.1	13.5	
7.0	111919.	-29.1			106.8	14.9	

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
 20 MAY 81
 ASCENSION NO. 36

SIGNIFICANT LEVEL DATA
 140000Z0036
 JALLEN
 TABLE 23

GEOGRAPHIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
875.4	4051.0	20.6	8.6	46.0
850.0	4881.2	16.8	5.7	48.0
773.2	7499.0	9.3	3.9	69.0
757.0	8077.7	10.5	1.1	52.0
727.8	9152.6	9.7	-7.0	30.0
700.0	10210.8	7.8	-11.5	24.0
559.6	16128.5	-5.4	-24.6	20.0
525.0	17766.2	-8.2	-30.2	15.0
500.0	19005.0	-11.0	-32.5	15.0
466.8	20733.2	-13.2	-33.6	16.0
432.2	22646.5	-17.5	-31.9	27.0
416.8	23536.2	-20.1	-23.2	76.0
400.0	24536.5	-22.0	-26.3	68.0
368.0	26539.0	-26.2	-30.3	68.0
353.8	27472.7	-28.0	-35.2	50.0
333.2	28883.1	-30.6	-46.6	19.0
306.8	30798.6	-34.4	-50.8	17.0
300.0	31313.1	-35.8		
250.0	35339.8	-46.6		
228.4	37345.1	-51.6		
200.0	40140.9	-58.3		
173.6	43028.9	-65.3		
155.4	45230.0	-69.3		
150.0	45925.5	-69.7		
138.6	47482.7	-68.6		
131.2	48578.1	-64.3		
120.0	50374.4	-65.2		
109.8	52161.7	-64.6		
106.4	52421.5	-62.6		
103.0	53459.4	-63.3		
100.0	54065.3	-59.8		
90.0	56225.1	-63.8		
87.2	56872.0	-59.5		
76.2	59643.6	-61.6		
70.0	61383.4	-60.7		
65.2	62853.9	-57.5		
55.2	66320.1	-58.4		
50.0	68393.2	-54.8		
48.2	69170.0	-53.7		
38.3	74052.9	-53.8		

STATION ALTITUDE 4051.00 FEET MSL
20 MAY 81 1000 HRS PDT
ASCENSION NO. 36

SIGNIFICANT LEVEL DATA
1400030036
JALLEN
TABLE 23 CON'T

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES	AIR DEWPONT CENTIGRADE	REL.HUM. PERCENT
32.0	77899.2	-50.5		
30.0	79294.9	-49.3		
27.6	81108.0	-48.1		
20.0	88166.2	-46.0		
18.3	90140.0	-42.0		
15.4	94021.6	-40.4		
13.0	97889.5	-35.3		
10.0	103961.3	-34.2		
7.6	109768.8	-30.8		
7.0	112323.9	-29.5		
6.2	115204.4	-28.4		

STATION ALTITUDE 4051.00 FEET MSL
20 MAY 81 1100 HRS MDT
ASCENSION NO. 36

UPPER AIR UTA
JALLEN
TABLE 24

GEOGRAPHIC COORDINATES
33°16'712 LAT DEG
106°49'511 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	REL.HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (IN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4051.0	875.4	20.6	9.6	46.0	1035.1	669.3	185.0	11.1	1.0000279
4500.0	861.6	18.5	7.1	47.1	1024.4	666.8	177.8	12.6	1.0000273
5000.0	849.4	16.5	5.7	49.0	1013.9	664.3	171.7	14.5	1.0000267
5500.0	831.2	15.0	5.5	53.0	1000.0	662.7	167.0	16.5	1.0000264
6000.0	816.3	13.6	5.2	57.0	987.6	661.1	164.5	18.4	1.0000261
6500.0	801.7	12.2	4.9	61.0	974.8	659.4	167.9	19.5	1.0000258
7000.0	787.3	10.7	4.4	65.0	962.2	657.7	171.4	20.8	1.0000254
7500.0	773.2	9.3	3.9	69.0	949.8	656.0	178.6	22.9	1.0000250
8000.0	759.2	10.3	1.5	54.3	929.7	657.1	184.5	25.1	1.0000239
8500.0	745.4	10.2	-1.7	43.4	914.0	656.7	191.4	27.0	1.0000229
9000.0	731.9	9.6	-5.6	33.1	899.2	656.0	196.2	29.2	1.0000219
9500.0	718.6	9.1	-8.4	28.0	885.4	655.0	199.4	30.9	1.0000213
10000.0	705.5	8.2	-10.5	25.2	872.3	653.9	202.2	32.7	1.0000207
10500.0	692.4	7.2	-12.1	23.8	859.4	652.7	204.4	34.7	1.0000203
11000.0	679.4	6.0	-13.2	23.5	846.7	651.3	206.0	36.9	1.0000199
11500.0	666.7	4.9	-14.4	23.1	834.3	650.0	206.4	39.2	1.0000196
12000.0	654.2	3.8	-15.5	22.8	822.0	648.7	206.7	41.6	1.0000192
12500.0	641.9	2.7	-16.6	22.5	809.9	647.3	206.7	44.1	1.0000189
13000.0	629.9	1.6	-17.7	22.1	798.0	646.0	207.8	47.3	1.0000185
13500.0	616.1	.5	-18.9	21.8	786.3	644.7	209.5	51.0	1.0000182
14000.0	603.5	-7	-20.0	21.4	774.8	643.3	211.1	54.6	1.0000179
14500.0	590.2	-1.8	-21.1	21.1	763.4	642.0	212.6	58.0	1.0000176
15000.0	584.0	-2.9	-22.2	20.8	752.3	640.7	214.4	60.7	1.0000173
15500.0	573.1	-4.0	-23.3	20.4	741.3	639.3	215.7	62.3	1.0000170
16000.0	562.3	-5.1	-24.5	20.1	730.4	638.0	216.5	62.7	1.0000167
16500.0	551.6	-6.0	-25.9	18.9	719.0	636.9	216.4	66.6	1.0000164
17000.0	540.9	-6.9	-27.6	17.3	707.4	635.8	216.0	68.1	1.0000161
17500.0	530.5	-7.7	-29.2	15.8	696.0	634.8	216.0	55.0	1.0000158
18000.0	520.2	-8.7	-30.6	15.0	685.1	633.6	216.7	52.5	1.0000155
18500.0	510.0	-9.9	-31.5	15.0	674.6	632.6	218.2	51.0	1.0000153
19000.0	500.1	-11.0	-32.5	15.0	664.3	630.9	220.2	53.2	1.0000150
19500.0	490.3	-11.6	-32.8	15.3	652.9	630.1	222.1	56.5	1.0000148
20000.0	480.6	-12.3	-33.1	15.6	641.6	629.3	223.6	58.7	1.0000145
20500.0	471.1	-12.9	-33.5	15.9	630.5	628.6	224.9	60.8	1.0000142
21000.0	461.8	-13.8	-33.2	17.5	620.1	627.5	226.2	60.2	1.0000140
21500.0	452.6	-14.9	-32.6	20.4	610.4	626.1	227.6	59.6	1.0000138
22000.0	443.6	-16.0	-32.2	23.3	600.8	624.8	228.2	59.0	1.0000136
22500.0	434.8	-17.2	-32.0	26.2	591.5	623.4	228.9	58.5	1.0000134
23000.0	426.0	-18.5	-27.1	46.5	582.5	621.8	229.7	59.2	1.0000134
23500.0	417.4	-20.0	-23.4	74.0	573.9	620.1	230.4	59.8	1.0000133

STATION ALTITUDE 4051.00 FEET MSL
20 MAY 81 100 HRS WDT
ASCENSION NO. 36

UPPER AIR DATA
1400030030
JALLEN

TABLE 24 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT PERCENT	KEL.HUM. GM/CUBIC METER	DENSITY SOUND KNOTS	SPEED OF WIND DATA KNOTS DEGREES(TN)	DIRECTION OF REFRACTION
24000.0	400.9	-21.0	-24.6	72.3	564.5	618.9	231.1
24500.0	400.6	-21.9	-26.2	68.3	555.1	617.7	231.9
25000.0	392.4	-23.0	-27.2	68.0	546.0	616.4	232.5
25500.0	384.3	-24.0	-28.2	68.0	537.0	615.1	233.2
26000.0	376.4	-25.1	-29.2	68.0	528.2	613.8	234.1
26500.0	368.6	-26.1	-30.2	68.0	519.5	612.5	235.1
27000.0	360.9	-27.1	-32.6	59.1	510.8	611.2	236.2
27500.0	353.4	-28.1	-35.3	49.4	502.1	610.0	237.2
28000.0	346.0	-29.0	-38.6	38.4	493.5	608.8	238.3
28500.0	338.7	-29.9	-42.6	27.4	484.9	607.7	239.6
29000.0	331.5	-30.8	-46.8	18.9	476.6	606.5	240.8
29500.0	324.5	-31.8	-47.9	18.4	468.3	605.2	241.9
30000.0	317.5	-32.8	-49.0	17.8	460.2	604.0	243.0
30500.0	310.6	-33.8	-50.1	17.3	452.3	602.7	244.1
31000.0	304.1	-34.9	-55.3	10.3**	444.8	601.3	245.3
31500.0	297.5	-36.3			437.6	599.6	246.7
32000.0	290.9	-37.6			430.3	597.9	248.0
32500.0	284.5	-38.9			423.2	596.2	249.0
33000.0	278.2	-40.3			416.2	594.5	249.9
33500.0	272.1	-41.6			409.3	592.8	250.7
34000.0	266.0	-42.9			402.6	591.1	252.2
34500.0	260.2	-44.2			395.9	589.4	253.6
35000.0	254.4	-45.6			389.4	587.7	255.2
35500.0	248.0	-46.9			383.0	586.0	256.8
36000.0	243.1	-48.2			376.3	584.4	259.2
36500.0	237.5	-49.4			369.8	582.7	261.9
37000.0	232.1	-50.7			363.5	581.0	264.9
37500.0	226.7	-52.0			357.1	579.4	268.1
38000.0	221.4	-53.2			350.6	577.6	268.7
38500.0	216.2	-54.4			344.3	576.2	268.9
39000.0	211.1	-55.6			338.0	574.7	267.8
39500.0	206.2	-56.8			331.9	573.1	266.6
40000.0	201.3	-58.0			326.0	571.5	266.0
40500.0	196.5	-59.2			319.9	569.9	265.5
41000.0	191.8	-60.4			314.0	568.5	264.7
41500.0	187.1	-61.6			308.1	566.6	264.0
42000.0	182.6	-62.8			302.4	565.0	263.7
42500.0	178.2	-64.0			296.8	563.4	263.6
43000.0	173.8	-65.2			291.3	561.8	263.9
43500.0	169.5	-66.2			285.3	560.5	264.2

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

SATION ALTITUDE 4051.00 FEET MSL
20 MAY 81 1410 HRS MDT
ASCENSION NO. 36

UPPER AIR DATA
1400030030
JALLEN
TABLE 24 CON'T

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

GEODETIC ALTITUDE MSL MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CURIC METER	SPD OF SOUND KILOTS	DIRECTION DEGREES (TN)	WIND DATA SHEEP KNOTS	INDEX OF REFRACTION
44000.0	165.3	-67.1	279.5	559.3	263.2	65.1	1.000062	
44500.0	161.2	-63.0	273.7	558.0	261.8	62.3	1.000061	
45000.0	157.2	-68.9	268.1	556.8	259.0	59.3	1.000060	
45500.0	153.3	-69.5	262.1	556.0	255.9	56.9	1.000058	
46000.0	149.4	-69.6	255.8	555.8	252.0	56.0	1.000057	
46500.0	145.7	-69.3	249.0	556.2	250.1	55.3	1.000055	
47000.0	142.0	-68.9	242.3	556.7	246.5	55.0	1.000054	
47500.0	138.5	-68.5	235.8	557.3	247.0	53.6	1.000053	
48000.0	135.1	-66.6	227.7	559.9	245.6	49.8	1.000051	
48500.0	131.7	-64.6	220.0	562.6	244.2	46.0	1.000049	
49000.0	128.5	-64.5	214.5	562.7	243.7	41.6	1.000048	
49500.0	125.3	-64.8	209.5	562.4	243.0	37.2	1.000047	
50000.0	122.3	-65.0	204.6	562.0	246.7	35.0	1.000046	
50500.0	119.3	-65.2	199.7	561.8	250.6	33.0	1.000044	
51000.0	116.3	-65.0	194.7	562.1	256.2	31.0	1.000043	
51500.0	113.5	-64.8	189.7	562.3	262.4	29.3	1.000042	
52000.0	110.7	-64.7	184.9	562.5	266.5	26.5	1.000041	
52500.0	108.0	-62.7	178.7	565.2	269.4	22.6	1.000040	
53000.0	105.4	-63.0	174.6	564.8	271.0	18.9	1.000039	
53500.0	102.8	-63.0	170.4	564.8	269.3	15.1	1.000038	
54000.0	100.3	-59.3	163.4	569.7	266.9	12.2	1.000036	
54500.0	97.9	-59.7	159.8	569.2	264.8	11.3	1.000036	
55000.0	95.5	-60.7	156.7	567.8	262.4	10.6	1.000035	
55500.0	93.2	-61.8	153.7	566.4	259.6	11.3	1.000034	
56000.0	91.0	-62.8	150.7	565.0	257.1	12.1	1.000034	
56500.0	88.8	-61.7	146.3	566.5	265.7	11.5	1.000033	
57000.0	86.7	-59.6	141.4	569.3	249.4	10.7	1.000031	
57500.0	84.6	-60.0	138.2	568.8	244.9	9.6	1.000031	
58000.0	82.5	-60.4	135.1	568.3	239.4	7.5	1.000030	
58500.0	80.6	-60.7	132.1	567.8	229.9	5.6	1.000029	
59000.0	78.6	-61.1	129.2	567.3	227.9	5.8	1.000029	
59500.0	76.7	-61.5	126.3	566.8	229.4	6.8	1.000028	
60000.0	74.9	-61.4	123.2	566.9	231.5	7.9	1.000027	
60500.0	73.1	-61.2	120.1	567.2	234.7	9.6	1.000027	
61000.0	71.3	-60.9	117.1	567.6	236.9	11.3	1.000026	
61500.0	69.6	-60.4	114.0	568.2	236.8	7.3	1.000025	
62000.0	67.9	-59.4	110.7	569.0	235.4	2.8	1.000025	
62500.0	66.3	-58.3	107.5	571.1	54.2	2.5	1.000024	
63000.0	64.7	-57.5	104.6	572.0	55.1	8.7	1.000023	
63500.0	63.2	-57.7	102.2	571.9	52.4	14.3	1.000023	

STATION ALTITUDE 4051.00 FEET MSL
20 MAY 81 100 HRS MD
ASCENSION NO. 36

UPPER AIR DATA
1400030n36
JALLEM

GEODETIC COORDINATES
33.16712 LAT LEG
106.49511 LON LEG

TABLE 24 CON'T

GEODETIC PRESSURE ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CURIC METER	SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	INDEX OF REFRACTION
64000.0	61.7	-57.8	99.8	571.7	48.8	16.1	1.000022
64500.0	60.2	-57.9	97.5	571.5	46.0	17.9	1.000022
65000.0	58.8	-58.1	95.3	571.4	46.0	18.1	1.000021
65500.0	57.4	-58.2	93.0	571.2	46.7	17.9	1.000021
66000.0	56.1	-58.3	90.9	571.0	50.0	17.4	1.000020
66500.0	54.7	-58.1	88.6	571.3	56.6	16.7	1.000020
67000.0	53.4	-57.2	86.2	572.5	63.5	16.2	1.000019
67500.0	52.2	-56.4	83.8	573.6	69.1	15.5	1.000019
68000.0	50.9	-55.5	81.5	574.8	75.2	15.0	1.000018
68500.0	49.7	-54.6	79.3	575.9	79.6	14.4	1.000018
69000.0	48.6	-53.9	77.2	576.8	82.4	13.7	1.000017
69500.0	47.5	-53.7	75.3	577.1	85.4	13.0	1.000017
70000.0	46.4	-53.7	73.6	577.1	88.1	12.4	1.000016
70500.0	45.3	-53.7	71.9	577.1	91.0	11.8	1.000016
71000.0	44.2	-53.7	70.2	577.1	94.2	11.3	1.000016
71500.0	43.2	-53.7	68.6	577.1	98.1	10.7	1.000015
72000.0	42.2	-53.8	67.0	577.0	102.4	10.2	1.000015
72500.0	41.2	-53.8	65.4	577.0	106.6	9.8	1.000015
73000.0	40.2	-53.8	63.9	577.0	110.6	9.4	1.000014
73500.0	39.3	-53.8	62.4	577.0	115.0	9.0	1.000014
74000.0	38.4	-53.8	61.0	577.0	99.8	11.5	1.000014
74500.0	37.5	-53.4	59.5	577.5	86.6	16.3	1.000013
75000.0	36.6	-53.0	58.0	578.1	79.7	21.6	1.000013
75500.0	35.8	-52.6	56.5	578.6	75.3	28.9	1.000013
76000.0	35.0	-52.1	55.1	579.2	80.8	21.5	1.000012
76500.0	34.2	-51.7	53.7	579.7	81.6	21.3	1.000012
77000.0	33.4	-51.3	52.4	580.3	77.9	25.1	1.000012
77500.0	32.6	-50.8	51.1	580.9	75.3	20.7	1.000011
78000.0	31.9	-50.4	49.8	581.4	73.9	31.6	1.000011
78500.0	31.1	-50.0	48.6	582.0	75.2	30.2	1.000011
79000.0	30.4	-49.6	47.4	582.6	76.5	28.8	1.000011
79500.0	29.7	-49.2	46.2	583.0	79.4	25.9	1.000010
80000.0	29.0	-48.8	45.1	583.5	80.4	20.7	1.000010
80500.0	28.4	-48.5	44.0	583.9	97.8	16.0	1.000010
81000.0	27.7	-48.2	42.9	584.5	111.2	13.3	1.000010
81500.0	27.1	-48.0	41.9	584.6	112.0	13.7	1.000009
82000.0	26.5	-47.8	41.0	584.9	112.7	14.1	1.000009
82500.0	25.9	-47.7	40.0	585.0	113.7	14.4	1.000009
83000.0	25.3	-47.5	39.1	585.2	123.9	13.3	1.000009
83500.0	24.7	-47.4	38.2	585.4	135.4	12.7	1.000008

STATION ALTITUDE 4051.00 FEET MSL
 20 MAY 81 100 HRS MDT
 ASCENSION NO. 36

UPPER AIR DATA
 JALLETI
 1400030036

TABLE 24 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CURIC METER	SOUND SPEED KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
84000.0	24.2	-47.2	37.3	585.5	147.6	12.6	1.000008	
84500.0	23.6	-47.1	36.4	585.7	137.0	12.3	1.000008	
85000.0	23.1	-46.9	35.6	585.9	120.9	12.8	1.000008	
85500.0	22.6	-46.8	34.8	586.1	106.9	14.1	1.000008	
86000.0	22.1	-46.6	34.0	586.3	97.8	15.5	1.000008	
86500.0	21.6	-46.5	33.2	586.5	91.5	16.6	1.000007	
87000.0	21.1	-46.3	32.4	586.7	86.1	17.9	1.000007	
87500.0	20.6	-46.2	31.6	586.9	82.4	18.7	1.000007	
88000.0	20.2	-46.0	30.9	587.1	80.9	18.2	1.000007	
88500.0	19.7	-45.3	30.1	588.0	79.2	17.7	1.000007	
89000.0	19.3	-44.3	29.3	589.3	77.8	17.0	1.000007	
89500.0	18.8	-43.3	28.5	590.6	79.4	14.7	1.000006	
90000.0	18.4	-42.3	27.8	591.9	81.6	12.4	1.000006	
90500.0	18.0	-41.9	27.1	592.5	84.8	10.1	1.000006	
91000.0	17.6	-41.6	26.5	592.8	89.9	8.8	1.000006	
91500.0	17.2	-41.4	25.9	593.0	96.7	7.7	1.000006	
92000.0	16.8	-41.2	25.3	593.3	105.5	6.8	1.000006	
92500.0	16.5	-41.0	24.7	593.5	116.7	6.1	1.000005	
93000.0	16.1	-40.8	24.2	593.8	120.5	5.9	1.000005	
93500.0	15.8	-40.6	23.6	594.1	121.6	5.8	1.000005	
94000.0	15.4	-40.4	23.1	594.3	122.7	5.7	1.000005	
94500.0	15.1	-39.8	22.5	595.2	123.8	5.6	1.000005	
95000.0	14.8	-39.1	22.0	596.0	121.0	5.6	1.000005	
95500.0	14.4	-38.5	21.4	596.8	115.8	5.8	1.000005	
96000.0	14.1	-37.8	20.9	597.7	110.9	6.0	1.000005	
96500.0	13.8	-37.1	20.4	598.5	106.4	6.3	1.000005	
97000.0	13.5	-36.5	19.9	599.3	106.0	6.2	1.000004	
97500.0	13.2	-35.8	19.4	600.2	111.4	5.7	1.000004	
98000.0	12.9	-35.3	18.9	600.8	117.7	5.3	1.000004	
98500.0	12.7	-35.2	18.5	601.4	125.0	4.9	1.000004	
99000.0	12.4	-35.1	18.1	601.9	133.7	4.7	1.000004	
99500.0	12.1	-35.0	17.7	601.2	144.6	4.5	1.000004	
100000.0	11.9	-34.9	17.4	601.3	155.9	4.5	1.000004	
100500.0	11.6	-34.8	17.0	601.4	166.8	4.7	1.000004	
101000.0	11.4	-34.7	16.6	601.5	176.5	5.0	1.000004	
101500.0	11.1	-34.6	16.2	601.6	175.7	4.9	1.000004	
102000.0	10.9	-34.6	15.9	601.8	174.5	4.8	1.000004	
102500.0	10.7	-34.5	15.5	601.9	173.3	4.7	1.000003	
103000.0	10.4	-34.4	15.2	602.0	172.0	4.6	1.000003	
103500.0	10.2	-34.3	14.9	602.1	179.7	5.0	1.000003	

STATION ALTITUDE 10500 FEET MSL
 20 MAY 81 00 HRS MDT
 ASCENSION NO. 36

UPPER AIR DATA
 1400030036
 JALLEH

TABLE 24 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
104000.0	10.0	-34.2		14.6	602.2	188.7	5.7	1.000003
104500.0	9.8	-33.9		14.2	602.6	195.7	6.5	1.000003
105000.0	9.6	-33.6		13.9	603.0	201.1	7.3	1.000003
105500.0	9.4	-33.3		13.6	603.3	197.4	8.1	1.000003
106000.0	9.2	-33.0		13.3	603.7	185.6	9.1	1.000003
106500.0	9.0	-32.7		13.0	604.1	176.4	10.4	1.000003
107000.0	8.8	-32.4		12.7	604.4	169.3	11.8	1.000003
107500.0	8.6	-32.1		12.4	604.8	164.2	13.5	1.000003
108000.0	8.4	-31.8		12.1	605.2	162.0	15.4	1.000003
108500.0	8.2	-31.5		11.9	605.5	160.2	17.3	1.000003
109000.0	8.1	-31.3		11.6	605.9	158.8	19.2	1.000003
109500.0	7.9	-31.0		11.3	606.3	157.7	21.1	1.000003
110000.0	7.7	-30.7		11.1	606.6	161.2	20.8	1.000002
110500.0	7.6	-30.4		10.9	606.9	165.6	20.4	1.000002
111000.0	7.4	-30.2		10.6	607.3	170.2	20.1	1.000002
111500.0	7.2	-29.9		10.4	607.6	174.9	19.9	1.000002
112000.0	7.1	-29.7		10.2	607.9			1.000002
112500.0	6.9	-29.4		9.9	608.2			1.000002
113000.0	6.8	-29.2		9.7	608.4			1.000002
113500.0	6.7	-29.1		9.5	608.7			1.000002
114000.0	6.5	-28.9		9.3	608.9			1.000002
114500.0	6.4	-28.7		9.1	609.1			1.000002
115000.0	6.3	-28.5		8.9	609.4			1.000002

STATION ALTITUDE 4051.00 FEET MSL
 20 MAY 81 1000 HRS WDI
 ASCENSION NO. 36

MAINTAINED LEVELS
 14000030036
 JALLEN

GEODETIC COORDINATES
 33°16'12" LAT DEG
 106°49'51" LON DEG

TABLE 25

PRESSURE MILLIBARS	GEOPOTENTIAL F E E T	TEMPERATURE		REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS
		AIR DEGREES	DEWPONT CENTIGRAVE			
850.0	4878.	16.8	5.7	48.	173.0	14.0
800.0	6560.	12.0	4.8	61.	168.3	19.7
750.0	8325.	10.3	-5.	47.	188.9	26.3
700.0	10201.	7.8	-11.5	24.	203.1	35.6
650.0	12189.	3.4	-15.9	23.	206.7	42.6
600.0	14300.	-1.3	-20.6	21.	211.9	56.8
550.0	16554.	-6.2	-26.2	19.	216.3	60.4
500.0	18980.	-11.0	-32.5	15.	220.2	53.2
450.0	21616.	-15.2	-32.4	21.	227.7	59.4
400.0	24497.	-22.0	-26.3	68.	231.9	62.1
350.0	27679.	-28.5	-36.8	44.	237.7	64.8
300.0	31253.	-35.8			246.1	71.0
250.0	35317.	-46.6			256.4	64.6
200.0	40046.	-58.3			265.9	63.6
175.0	42761.	-64.9			263.8	69.8
150.0	45805.	-69.7			253.3	56.1
125.0	49415.	-64.8			243.2	37.1
100.0	53902.	-58.8			266.7	12.1
80.0	58457.	-60.8			226.6	5.1
70.0	61171.	-60.7			236.9	6.6
60.0	64359.	-57.9			45.7	18.1
50.0	68140.	-54.8			78.9	14.6
40.0	72843.	-53.8			111.4	9.3
30.0	76950.	-49.3			77.2	26.1
25.0	82901.	-47.5			129.1	13.0
20.0	87757.	-46.0			80.5	18.0
15.0	94148.	-39.6			124.0	5.6
10.0	103400.	-34.2			187.3	5.6
7.0	111673.	-29.5				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

**DAT
FILM**